CITY OF ROCHESTER
201 4TH STREET SE, ROOM 108
ROCHESTER, MN 55904-3742
********PROPOSAL*********

FOR HIGHWAY CONSTRUCTION
AND MAINTENANCE PROJECTS WITH
BIDS RECEIVED UNTIL 11:00 O'CLOCK A.M. ON **May 1, 2012**

PROPOSAL OF _____
(Name of Firm) (Phone No.)

_____
(Address) (Fax No.)

_____
(City) (State) (Zip)

TO FURNISH AND DELIVER ALL MATERIALS AND TO PERFORM ALL WORK IN ACCORDANCE WITH THE CONTRACT, THE PLANS AND THE APPROVED DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION", 2005 EDITION, EXCEPT AS STATED OTHERWISE IN THE SPECIAL PROVISIONS WHICH ARE PART OF THIS PROPOSAL, FOR

CITY PROJECT NO. **6202-4-10** J NO. **(J7788)**

STATE PROJECT NO. _____

MINNESOTA PROJECT NO. _____

LOCATION: **2nd St NW, ROCHESTER, MN**

TYPE OF WORK **Trunkline Sanitary Sewer and Road Reconstruction**

LENGTH **0.65** MILES STARTING DATE: **May 15, 2012**

COMPLETION DATE: **November 15, 2012**

I certify that this Proposal was prepared by me or under my direct supervision, and that I am a licensed professional engineer under the laws of the State of Minnesota.

Russell J. Kelm 04/16/2012
Russell J. Kelm, License Number 24667 (Date)

****

BID RIGGING IS A SERIOUS CRIME. IF YOU HAVE ANY INFORMATION CONCERNING COLLUSIVE BIDDING, EVEN A REQUEST TO SUBMIT A COMPLIMENTARY BID, PLEASE CALL THE MINNESOTA ATTORNEY GENERAL'S OFFICE AT TELE. NO. 651-296-1796

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CITY OF ROCHESTER
NOTICE OF BIDS

Notice is hereby given that bids will be received at the office of the City Clerk until **11:00 A.M. on Tuesday, May 1, 2012** for the construction of the following described local improvement, pursuant to Minnesota Statutes, Chapter 429, as amended, in accordance with the plans and specifications for the same which are on file in the Office of the City Clerk of said City:

City No: **6202-4-10 (J7788)**
Title: **Reconstruct Sanitary Sewer in 2nd Street NW from 12th Avenue NW East to 8th Avenue NW and then North in 8th Avenue NW to Civic Center Drive NW.**

Immediately following expiration of the time for receiving bids, the City Clerk and two designated City officials will publicly open said bids in the City Hall and tabulate them in advance of the Council meeting. The Common Council will consider the bids in the Council/Board Chambers at the Government Center **at 7:00 P.M.** on **May 7, 2012.**

Said Construction generally consists of **Sanitary, Watermain, Storm Sewer, Service Connections and Street Reconstruction**. The work includes the following approximate quantities of work:

Furnish &Install 8in Alternate Pipe Sewer	**2177**	**L F**
Furnish & Install 21in Alternate Pipe Sewer (Tunneled 5)	**2757**	**L F**
Sanitary Sewer Creek Siphon	**1**	**LS**
Furnish & Install 12in RCP Storm Sewer	**472**	**L F**
Furnish & Install 15" RCP Storm Sewer	**750**	**LF**
Furnish & Install 18" RCP Storm Sewer	**320**	**LF**
Furnish & Install 8in Ductile Iron Pipe Class 52	**2762**	**LF**
Common Excavation (P)	**2000**	**C Y**
Aggregate Base (CV) Class 2 (P)	**2500**	**C Y**
Wearing Course Mixture	**1175**	**Ton**
Non Wearing Course Mixture	**1175**	**Ton**
Concrete Curb & Gutter Design B624	**5500**	**L F**
Sodding Type Mineral	**6000**	**S Y**
6" Concrete Walk	**2884**	**S F**

Plan, Specifications and Contract Documents may be examined at the Department of Public Works, 201 4th St. SE, Room 108, Rochester, MN 55904, (507) 328-2400 or the City's website at https://egram.rochestermn.gov/.

Each bid must be sealed and accompanied by a cash deposit, bid bond, cashier's check or a certified check payable to the City of Rochester, Minnesota, for at least **5%** the amount of the bid, which amount shall be forfeited to the City of Rochester, Minnesota, as liquidated damages if the bidder, upon the letting of the contract to him shall fail to enter into the contract so let; the Common Council reserving the right to reject any and all bids.

A Performance and Payment Bond for the full amount of the contract by a surety company authorized to do business in the State of Minnesota will be required with the contract. (Personal bonds will not be accepted.)

All proposals must be addressed to the City Clerk, City of Rochester, 201 4th St. SE, Room 135, Rochester, Minnesota 55904-3742 and shall have endorsed thereon:

City No: **6202-4-10 (J7788)**
Title: **Reconstruct Sanitary Sewer in 2nd Street NW from 12th Avenue NW East to 8th Avenue NW and then North in 8th Avenue NW to Civic Center Drive NW.**

Dated at Rochester, Minnesota this **16th day of April, 2012.**

JUDY K. SCHERR, CMC, City Clerk

DIVISION S

S-1 DESCRIPTION

The Contract stipulations that follow are general in scope and may refer to conditions that will not be encountered on the work covered by the Contract. Any provision of these general requirements that pertains to a nonexistent condition or is not applicable to the work to be performed here under, or that conflicts with any provision of the Special Provisions or with any special instructions to bidders, shall have no meaning in the Contract and shall be disregarded.

S-2 REFERENCE DOCUMENTATION

Reference Documentation shall be the latest edition, including amendments and published updates, issued prior to the date of advertisement for bids or the date of request for quotations, of the following:

1. Minnesota Department of Transportation (Mn/DOT) Standard Specifications for Construction.
2. City of Rochester Ordinances.
3. City of Rochester Standard Detail Plates.
4. City of Rochester Standard Specifications for Street & Utility Construction.

S-3 DESIGNATION OF PARTIES

S-3.1 "City"

"City" shall mean the City of Rochester, 201 4th Street SE, Room 108, Rochester, MN 55904.

S-3.2 "Owner"

"Owner" shall mean the City of Rochester, 201 4th Street SE, Room 108, Rochester, MN 55904 or as named in the contract documents.

S-3.3 "Department"

"Department" shall mean the City of Rochester, 201 4th Street SE, Room 108, Rochester, MN 55904 or as named in the contract documents.

S-3.4 "Engineer"

"Engineer" shall mean the City Engineer or other authorized representative of the Owner as named in the contract documents.

S-3.5 "Inspector"

"Inspector" shall mean the Engineer's authorized representative assigned to make inspections of Contract performance.

S-3.6 "Bidder"

"Bidder" shall mean any individual or entity submitting a Proposal for the advertised work.

S-3.7 "Contractor"

"Contractor" shall mean the individual or entity designated in the Contract documents to construct the project pursuant to plans and specifications.

S-3.8 "Sub-Contractor"

"Sub-Contractor" shall mean the individual or entity acting for or on behalf of the Contractor in performing any part of the Contract.

S-3.9 "Mndot"

"Mndot" shall mean the Minnesota Department of Transportation.

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

S-4 DEFINITION OF TERMS

S-4.1 Amount of Contract

For the purpose of awarding the Contract and determining the amount of the Bond, the Contract amount shall be the total amount of the bid.

S-4.2 Date of Acceptance

Date of Acceptance shall be the day when final inspection reveals that the work has been completed in strict accordance with the provisions of the Plans and other Contract documents, and with previous inspection documents.

S-4.3 Date of Final Acceptance

Date of Final Acceptance shall be a day, at least two (2) years after the Date of Acceptance, at which time the City determines that the work continues to be in strict accordance with the provisions of the Plans and other Contract and inspection documents. The Date of Final Acceptance denotes the termination of Contractor's maintenance obligation.

S-4.4 Liquidated Damages

Liquidated damages are the amount prescribed in Mn/DOT Section 1807 to be paid to the Owner, or to be deducted from any payments due or to become due to the Contractor, for each day that work remains uncompleted after expiration of the Contract time as determined and extended in accordance with Mn/DOT Section 1806.

S-4.5 "Incidental"

Whenever in any section of the Contract documents, Plans or Specifications, any item, material or application is defined as incidental, Payment shall be incidental to the Contract and no direct compensation will be made.

S-4.6 "Or Approved Equal" Clause

Whenever in any section of the Contract documents, Plans or Specifications, any article, material or equipment is defined by describing a proprietary product, or by using the name of manufacturer or vendor, the term "or approved equal" if not inserted, shall be implied.

The specific article, material, or equipment mentioned shall be understood as indicating the type, function, minimum standard of design, efficiency, and quality required and shall not be construed in such a manner as to exclude manufactured products of comparable quality, design, and efficiency. The Engineer shall determine the acceptability of articles, materials, or equipment proposed "as equal".

S-4.7 Standard Documents

Standard Documents are those that are referred to but not included in the Plans, Specifications and Special Provisions. Standard Documents are available to the public and it is the Contractor's sole responsibility to obtain and understand the requirements of any Standard Documents noted in the Plans, Specifications and Special Provisions. Examples of Standard Documents include but are not limited to:

Bid documents (Advertisement, Information to Bidders, Proposal and Bid Security)

Performance and Payment Bond forms

Project Specifications and Special Provisions

City of Rochester, Minnesota, Department of Public Works documents:

Standard Specifications for Street and Utility Construction

Standard Detail Plates

Minnesota Department of Transportation documents:

Standard Specifications for Construction.

Standard Plates Manual.

ASTM Material Specifications.

S-5 CONTRACT WORDING

Whenever in these Contract documents the words "As Ordered", "As Directed", "As Required", "As Permitted", "As Allowed", or words or phrases of like import are used, it shall be understood that the order, direction, requirement, permission, or allowance of the Owner and Engineer is intended.

Similarly the words "Approved", "Reasonable", "Suitable", "Acceptable", "Properly", "Satisfactory", or words of like effect and import, unless otherwise particularly specified therein, shall mean approved, reasonable, suitable, acceptable, proper, or satisfactory in the judgment of the Owner and Engineer.

S-6 AWARD AND EXECUTION OF CONTRACT

S-6.1 Payment and Performance Bonds

The successful Bidder, at the time of the execution of the Contract, shall furnish a Payment Bond equal to the Contract amount and a Performance Bond equal to the Contract amount, as required by Minn. Stat. Section 574.26. The bonds shall be issued by sureties satisfactory to the City and authorized to do business in the State of Minnesota.

The Payment Bond and Performance Bond shall guarantee that the Contractor will perform each and every part of the agreement, cover all guarantees called for in these Specifications, including the provisions for maintenance and repair, and insure the prompt payment to all persons furnishing material and labor required in the prosecution of the work. The Performance Bond shall be written in such a manner that it shall remain effective until the Date of Final Acceptance (two (2) years after the Date of Acceptance by the City, provided the work is in accordance with the Specifications and any inspection instructions, and all defects identified during the two (2) year period have been corrected).

In the event the Surety on any Bond furnished by the Contractor is declared bankrupt or becomes insolvent, or its right to do business in Minnesota is terminated, or it otherwise ceases to meet the requirements set forth herein, the Contractor shall, within five days thereafter, substitute another Bond and Surety, both of which shall be subject to Owner's acceptance.

If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be the Contractor's responsibility to so notify the Surety, and the amount of each applicable Bond shall be adjusted accordingly. Contractor shall furnish proof of such adjustment to the Owner.

S-6.2 Execution of Contract

The Contractor shall not, under any circumstance, assign the Contract or any payments due hereunder without written permission by the City.

The Contract will be made on the forms used by the City of Rochester, and made a part of the General Requirements and Covenants, copies of which are also on file at the office of the City Clerk, Room 135, City Hall, Rochester, Minnesota.

S-7 CONTROL OF WORK

S-7.1 Drawing and Specification

The Specifications and Plans are intended to supplement, but not necessarily duplicate each other, and together constitute one complete set of Specifications and Plans so that any work exhibited in the one and not in the other, shall be executed as if it has been set forth in both, in order that the work shall be completed according to the complete design or designs as decided and determined by the Engineer.

Should anything be omitted from the Specifications and Plans that is necessary to a clear understanding of the work, or should it appear various instructions are in conflict, the Contractor shall secure written instructions from the Engineer before proceeding with the construction affected by such omissions or discrepancies. It is understood and agreed that the work shall be performed and completed according to the true spirit, meaning, and intent of the Contract, Plans, and Specifications.

All Drawings, Specifications and copies thereof furnished by the City are its property. They are not to be used on other work and, with the exception of the signed Contract, plan sets are to be returned to the City upon request at the completion of the work.

Contractor shall keep and maintain one complete set of all drawings and specifications, addenda, approved shop drawings, change orders and other modifications at the job site that shall be available to the Engineer at all times.

S-7.2 Surveys, Staking and Monument Preservation

The Contractor shall give the Engineer at least 2 working days notice before requiring any stakes to be set or before commencing work on any portion of the Contract, or at any new place, as well as at any place where work has been relinquished or stopped for any reason.

Any work done without being properly located and established by base lines, offset stakes, bench marks, or other basic reference points located, established, or checked by the Engineer, may be ordered removed and replaced at the Contractor's cost and expense.

The Contractor shall carefully protect and preserve any permanent monuments or benchmarks that must of necessity be removed or disturbed in the construction of the work, until they can be properly referenced for relocation.

S-7.3 Other Contracts and Contractors

The Owner reserves the right to award contracts to other Contractors who do additional work at the site of this Project pursuant to Mn/DOT section 1505.

S-7.4 Testing of Completed Work

Before final acceptance, all parts of the work shall be tested and each part shall be in good condition and working order, or shall be placed in such condition and order at the expense of the Contractor. All tests of completed work required under this Contract shall be made under the direction of the Engineer or others so designated and at the expense of the Contractor, who shall repair at its own expense all damage resulting there from.

S-8 MEASUREMENT & PAYMENT

S-8.1 Partial Payment

Unless the terms of the contract provide otherwise, progress payments shall be made monthly as the work progresses. Payments shall be based upon estimates of work completed as approved by the City. A progress payment shall not be considered acceptance or approval of any work or waiver of any defects therein.

The City may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. The City may reduce the amount of the retainage and may eliminate retainage on any monthly contract payment if, in the City's opinion, the work is progressing satisfactorily.

For further details refer to Mn/DOT specification 1906 "Partial Payments".

S-8.2 Acceptance and Final Payment

When final inspection reveals that the work has been completed in strict accordance with the provisions of the Plans, other Contract documents, and previous inspection instructions, the

Engineer shall, within ninety (90) days thereafter, prepare a final estimate which shall be based on accurate measurements of all work performed, and shall submit such estimate together with recommendations to the City Council of the City of Rochester for approval. Payment shall then be made for all work performed under the Contract, less any partial payments already made and any legal deductions or forfeitures for the satisfaction of liens or other claims against the Contract.

S-8.3 Correction of Work After Final Payment

Neither acceptance and occupancy by the Owner, final payment, nor any other provision in the Contract documents, shall relieve the Contractor of its maintenance obligation as hereinafter set forth and as identified in the Specifications.

S-8.4 Maintenance and Repair

The Contractor shall guarantee all work relating to the Specifications for a period of at least two (2) years from the date of written acceptance of the work or project. The Contractor shall make all needed repairs arising out of defective workmanship or materials that, in the judgment of the City, become necessary during such period. Final acceptance and termination of the maintenance obligation shall occur on the date two (2) years after initial acceptance provided that the work is in accordance with the Specifications and any inspection instructions. The maintenance obligation shall otherwise continue until all defects, including defective equipment installed therein, have been corrected.

At any time prior to Final Acceptance (the time during which the maintenance obligation is in effect as provided herein) the City may demand that the Contractor make any noted repairs. If Contractor fails to undertake repairs within ten days after the mailing of a notice of the need to make such repairs, the City may either take action against the performance bond or make the repairs itself and recover the cost from Contractor or the surety under the performance bond.

S-9 OWNER AND EASEMENTS

The City of Rochester is designated as the Owner. All work shall be located on public right-of-way or on easements to be provided by the Owner. The Contractor shall confine his operations at all times within the limits of the easements. Any repairs or restoration outside the easement limits, required due to the Contractor's carelessness, shall be made with no compensation allowed.

1. **If the Contractor obtains an agreement with a private land owner related to this project the City shall be provided a copy signed by the owner.**

S-10 CONFLICTS IN DIMENSIONING

In case of conflict between dimensions shown on the plans or detail drawing and those in the specifications, the dimensions on the drawings shall govern. If the conflict is other than dimensions, the specifications shall govern.

S-11 PRE-CONSTRUCTION CONFERENCE

A pre-construction conference will be scheduled after Engineer's receipt of the Contractor's schedule. The Contractor shall submit to the Engineer a schedule illustrating in bar chart form the anticipated commencement date and duration of each of the major work tasks prior to the pre-construction conference. These tasks shall be broken down by type of work and location as necessary for purposes of planning and coordinating the work of this contract. The schedule should address the phasing of construction in a manner that will provide good project coordination. The Contractor will be required to update or modify the written construction schedule as necessary to accurately reflect the rate and progress on the project.

The conference will be held with the Contractor, City Representative, Engineer and other parties involved in the project. Materials, material sources, construction methods, and scheduling will be reviewed and any questions or procedures will be clarified.

S-12 CONTACT INFORMATION

Questions regarding this Project shall be directed to:

Jim Loehr
Project Manger
City of Rochester
(507) 328-2419

S-13 RESIDENT PREFERENCE IN PUBLIC CONTRACTS

The provisions of Mn/DOT 1302 are modified to the extent that, in accordance with Minnesota Statutes, section 16.365 (1982) as amended by Minn. Laws 1984, Chapter 440, Section 2, (Resident Preference in Public Contracts), this Contract will be awarded to the lowest responsible bidder, with resident bidders allowed a preference as against a non-resident bidder from a state which gives or requires a preference to bidders from that state, the preference shall be equal to the preferences given or required by the state of the non-resident bidder.

S-14 (1213) DISQUALIFICATION OF BIDDERS

The provisions of Mn/DOT 1213 are hereby deleted and replaced with the following:

S-14.1 Either of the following reasons may be considered sufficient cause for disqualification of a bidder and the rejection of his Proposals:

(1) More than one Proposal for the same work from an individual, firm, or corporation under the same or different name. Substitute bid schedules shall be governed by Mn/DOT 1206.

(2) Evidence of collusion among bidders. Participants in collusion will receive no recognition as bidders on future work until they have been reinstated as responsible bidders.

S-15 (1302) AWARD OF CONTRACT RESIDENT PREFERENCE IN PUBLIC CONTRACTS

The provisions of Mn/DOT 1302 are modified to the extent that, in accordance with Minnesota Statutes, section 16.365 (1982) as amended by Minn. Laws 1984, Chapter 440, Section 2, (Resident Preference in Public Contracts), this Contract will be awarded to the lowest responsible bidder, with resident bidders allowed a preference as against a non-resident bidder from a state which gives or requires a preference to bidders from that state, the preference shall be equal to the preferences given or required by the state of the non-resident bidder.

The City shall have up to **60 days** from the bid opening to award the contract during which time the bid unit prices shall prevail.

S-16 (1305) REQUIREMENT OF CONTRACT BOND

The provisions of Mn/DOT 1305 are hereby deleted and replaced with the following:

The successful bidder shall furnish a payment bond equal to the contract amount and a performance bond equal to the contract amount as required by Minnesota Statutes, section 574.26. The surety and form of the bonds shall be subject to the approval of the contracting authority.

The contracting authority shall require for all contracts less than or equal to five million dollars ($5,000,000.00), that the aggregate liability of the payment and performance bonds shall be twice the amount of the contract. All

contracts in excess of five million dollars ($5,000,000.00) shall have an aggregate liability equal to the amount of the contract.

S-17 (1404) MAINTENANCE OF TRAFFIC, (1707) PUBLIC SAFETY, AND (2563) TRAFFIC CONTROL

The provisions of 1404 are supplemented as follows:

S-17.1 Traffic Control

The Contractor shall furnish, install, maintain, and remove all traffic control devices required to provide safe movement of vehicular and/or pedestrian traffic passing through the work zone during the life of the Contract from the start of Contract operations to the final completion thereof. The Engineer will have the right to modify the requirements for traffic control as deemed necessary due to existing field conditions.

Traffic control devices include, but are not limited to, barricades, warning signs, trailers, flashers, cones, drums, pavement markings and flaggers as required and sufficient barricade weights to maintain barricade stability.

The Contractor shall furnish names, addresses, and phone numbers of at least three (3) individuals responsible for the placement and maintenance of traffic control devices. At least one of these individuals shall be "on call" 24 hours per day, seven days per week during the times any traffic control devices, furnished and installed by the Contractor, are in place. The required information shall be submitted to the Engineer at the Pre-construction Conference. The Contractor shall also furnish the names, addresses, and phone numbers of those individuals to the following:

1.	Rochester Public Works Department	(507) 328-2400
2.	Rochester Police Department	(507) 328-2800
3.	Local Fire Department	(507) 328-6300
4.	City/Township Clerk	(507) 328-2900

The Contractor shall, at the pre-construction conference, designate a Work Zone Safety Coordinator who shall be responsible for safety and traffic control management in the Project work zone. The Work Zone Safety Coordinator shall be either an employee of the Contractor such as a superintendent or a foreman, or an employee of a firm which has a subcontract for overall work zone safety and traffic control management for the Project. The responsibilities of the Work Zone Safety Coordinator shall include, but not be limited to:

- Coordinating all work zone traffic control operations of the Project, including those of the Contractor, subcontractors and suppliers.
- Establishing contact with local school district, government, law enforcement, and emergency response agencies affected by construction before work begins.
- Maintaining a record of all known crashes within a work zone. This record should include all available information, such as: time of day, probable cause, location, pictures, sketches, weather conditions, interferences to traffic, etc. These records shall be made available to the Engineer upon request.

The Contractor shall inspect, on a daily basis, all traffic control devices, which the Contractor has furnished and installed, and verify that the devices are placed in accordance with the Traffic Control Layouts, these Special Provisions, and/or the MN MUTCD. Any discrepancy between the placement and the required placement shall be immediately corrected. The person performing the inspection shall be required to make a daily log. This log shall also include the date and time any changes in the stages, phases, or portions thereof go into effect. The log shall identify the location and verify that the devices are placed as directed or corrected in accordance with the Plan. All entries in the log shall include the date and time of the entry and be signed by the person making the inspection. The Engineer reserves the right to request copies of the logs as he deems necessary.

S-17.2 Maintenance and Staging of Traffic Control:

The Contractor is hereby advised that the phasing, construction staging, the work sequencing, and the maintenance of pedestrian and vehicular traffic control and related signage are critical on this project. The Contractor shall fully expect to employ significant measures to control and maintain pedestrian, vehicular traffic throughout the life of the project. The major phases of construction are as follows:

Construction and Traffic Control Phases

Prior to the start of the work, the contractor shall submit detailed traffic control plans for approval by the engineer. The Traffic Control Plan shall present the traffic control devices and layouts required for each stage of work. The plan shall also indicate maintenance and routing of pedestrian traffic throughout the project corridor.

The contractor is hereby advised that the phasing, construction staging, the work sequencing, and the maintenance of pedestrian and vehicular traffic control and related signage are critical on this project. The contractor shall fully expect to employ significant measures to control and maintain pedestrian and vehicular traffic throughout the life of the project.

1. Contractor shall not remove roadways and driveways a distance greater than 200 feet in advance of the sanitary sewer work.
2. Contractor shall maintain access to either 8-1/2 Avenue or to the alley located between 8-1/2 Avenue and 9th Avenue at all times.
3. Contractor shall provide a temporary access road between 8-1/2 Avenue and the alley as shown on the plan sheets on an aggregate surface. This temporary access road is to provide access for the private property owners. The temporary access road shall not be used by the Contractor. Removal of the temporary access road aggregates shall be incidental to the Aggregate base pay item. Turf restoration will be paid for under the turf restoration items
4. Contractor shall coordinate vehicle and pedestrian access to private property by providing three (3) days notice to the property owners regarding access disruptions or changes to access.
5. Contractor shall ensure that vehicle access to private driveways is not restricted for greater than five (5) consecutive calendar days.
6. Contractor shall coordinate special vehicle access accommodations as may be required at the request of private property owners.
7. Contractor shall provide access accommodations for private garbage collectors.
8. **2nd Street/11th Avenue Intersection**
    a. Contractor shall be allowed to close the intersection of 2nd Street and 11th Avenue NW at 12 Noon on a Friday to perform work within the intersection. The Contractor shall submit for the Engineers approval, a detour plan which includes providing all the necessary signing for a detour route along 2nd St SW to 16th Ave NW to Civic Center Drive.
    b. **ADVANCE SIGNING SHALL BE INSTALLED 7 DAYS BEFORE CONSTRUCTION IS TO BEGIN** as approximately located in the plan and as approved by the Engineer. The Contractor shall notify the Engineer at least five (5) working days in advance of his intent to close lanes.
    c. All work required within the intersection with the exception of sod hall be completed over a period of three (3) full weekends (Saturday-Sunday) and two (2) full five (5) day weeks (Monday-Friday).
    d. Contractor shall open the intersection to unrestricted north-south vehicle and pedestrian traffic prior to 6:00 AM the Monday after the third full weekend.
    e. If the Contractor fails to complete the work within the intersection within the time period specified and open the intersection to unrestricted north-south vehicle and pedestrian

traffic as specified the Contractor shall be subject Interim Liquidated Damages of **$1,000 per calendar day.**

The liquidated damages set forth in MnDOT 1807 and any monetary deductions as set forth above may apply equally, separately, and may be assessed concurrently.

Local access to abutting property must be maintained at all times. The Contractor is required to maintain road surfaces so that any local traffic abutting the project can safely travel within the project. At all times throughout this project, the Contractor shall keep all directly affected property owners informed as to the appropriate access route being provided and maintained for them.

A traffic flow pattern on city streets shall be maintained to provide emergency vehicle access to all property. Fire hydrants, on or adjacent to the work, shall be kept accessible to firefighting equipment at all times. All street closings shall be approved by the city prior to closing. The temporary closing of any streets will require the installation of sufficient barricades, fences, and signs, to adequately deter traffic from entering the sites. If the streets are not closed, one lane of traffic shall be maintained at all times, and signs installed indicating "local traffic only".

Haul routes shall generally be along C.S.A.H. streets or trunk highways, and coordinated with the engineer.

S-17.3 Measurement and Payment

No measurement will be made of the various Items that constitute Traffic Control but all such work will be construed to be included in the single Lump Sum payment under Item 2563.601 (Traffic Control)

Item No.	Item	Unit
2563.601	TRAFFIC CONTROL	L S

S-18 (1506) SUPERVISION BY CONTRACTOR

The provisions of Mn/DOT 1506 are supplemented as follows:

At the Preconstruction Conference the Contractor shall designate in writing who the competent superintendent and competent individual (if different) will be for this Project. These persons can only be changed throughout the duration of the Project by submission of written authorization to the Engineer by the Contractor. The submittal of these persons shall be done before any work is performed on this Project.

The Contractor will be subject to an hourly charge for failure to comply with the requirements of Mn/DOT 1506. Non-Compliance charges, for each incident, will be **assessed at a rate of $100 per hour**, for each hour or portion thereof, during which the Engineer determines that the Contractor has not complied. No charge will be made if the deficiency is corrected within one (1) hour of notification.

An incident of Non-Compliance will be defined as the receipt of a written work order by the Contractor with instructions to correct a deficiency.

S-19 (1507) UTILITY PROPERTY AND SERVICE

Construction operations in the proximity of utility properties shall be performed in accordance with the provisions of Mn/DOT 1507, except as modified below:

S-19.1 The provisions of Mn/DOT 1507.1 B are hereby deleted and the following substituted therefore:

B Gopher State One Call

The Contractor shall:

(1) Mark the proposed excavation in accordance with the Minnesota State Statute 216D color code before contacting "Gopher State One Call." The Contractor shall mark proposed excavation area with white paint and

white flags or in lieu of white flags, white stakes may be used. The Contractor must adhere to all requirements of Gopher State One Call in addition to the following:

The white markings must delineate the **actual excavation area** where the locating of underground facilities is required. All flags and stakes shall display the name, and phone number of the Contractor. All areas of proposed excavation shall be considered "practical" for the use of white markings, pursuant to Minnesota Statutes §216D.05 (2).

(2) Call "Gopher State One Call" at least 48 hours (excluding Saturdays, Sundays, and holidays) before starting excavation operations.

(3) The Contractor shall acquire a Positive Response confirmation from Mn/DOT for all proposed excavations when the Gopher State One Call has indicated Mn/DOT utilities may be affected. The Contractor may call Mn/DOT Electrical Services Section (ESS) Dispatch Locating to confirm the status of Utility infrastructure owned by Mn/DOT. Mn/DOT Electrical Services Section (ESS) Dispatch Locating can be contacted at the following phone numbers; (651) 366 -5750 or (651) 366-5751. The Contractor shall be responsible for all damage to Mn/DOT owned Utility infrastructure if a Positive Response confirmation has not been acquired from Mn/DOT. The Contractor is required to comply with the provisions of Minnesota Statutes chapter 216D when performing Excavation as defined in Minnesota Statutes §216D.01 (subdivision 5), and will be responsible for damages to facilities in accordance with Minnesota Statutes §216D.06.

S-19.2 All utilities that relate to this Project are classified as "Level D," unless the Plans specifically state otherwise. This utility quality level was determined according to the guidelines of CI/ASCE 38-02, entitled "Standard Guidelines for the Collection and depiction of existing subsurface utility data."

S-19.1 By bidding on this Contract, the bidder agrees that it shall use the Plan to identify the location of Mn/DOT drainage facilities as satisfying the requirements of Minnesota Statutes Ch. 216D and Minnesota Rules 7560.0250 with respect to Mn/DOT's storm water drainage facilities.

S-19.2 The following utility owners have existing facilities that may be affected by the work under this Contract, all of which they intend where necessary to relocate or adjust in advance of or concurrently with the Contractor's operations.

Full Name	Company	Description	Business Phone
Steve Hyke	MN Energy Resources	Gas - Yellow	(507) 529-5104
Ron Muller	Charter Communications	Cable-Orange	(507) 285-6164
Wally Carlson	Mayo Clinic Facilities	Other	(507) 266-8142
Kay Klemmer	Northern Natural Gas	Gas - Yellow	(507) 451-7760 3202
Pat Lynch	Zayo Bandwidth	Fiber Optics - Orange	(952) 230-4288
Rick Wellik	Peoples Cooperative Power	Communications - Orange	(507) 288-4004
Doug Feine	Public Works OWEF	Steam - Yellow	(507) 328-7033
Julie Schletty	Centurylink	Telephone - Orange	(507) 285-3629
Donn Richardson	Rochester Public Utilities	Water Dept - Blue	(507) 280-1509
Mike Engle	Rochester Public Utilities	Electric - Red	(507) 280-1579
Steve Cook	Rochester Public Utilities	Electric - Transmission	(507) 280-1590
Eric Loftus	Rochester Public Works	Sewer - Green	(507) 328-2437

S-19.3 Utilities

S-19.4 The Contractor shall coordinate his/her work and cooperate with the foregoing utility owners and their forces in a manner consistent with the provisions of Mn/DOT 1507 and the applicable provisions of Mn/DOT 1505.

S-19.5 The City of Rochester utilities that are affected such as storm sewer, sanitary sewer, and water supply have been included in the Plan for adjustment or relocation. The Contractor shall notify **Jim**

Loehr, Project Manager at telephone (507) 328-2419, in advance of the date he intends to start work and he shall furnish that office with such information as may be necessary to permit the responsible authorities to make suitable arrangements relative thereto.

S-19.6 The Contractor shall verify all underground utility locations and elevations prior to construction. (Gopher State One Call 1-800-252-1166)

S-20 (1710) TRAFFIC CONTROL DEVICES

All traffic control devices and methods shall conform to the Minnesota Manual on Uniform Traffic Control Devices (MN MUTCD), Minnesota Standard Signs Manual, the Traffic Engineering Manual, and the following:

In accordance with the MN MUTCD all sign supports shall be crashworthy. Signs installed on barricades, barricade sign combinations, and all other portable supports shall be crashworthy. This includes all new and used Category I and Category II devices.

The Contractor shall provide the Project Engineer a Letter of Compliance stating that all of the Contractors Category I and II Devices are NCHRP 350 approved as of July 1, 2006. The Letter of Compliance must also include approved drawings of the different signs and devices and shall be provided to the Project Engineer at the Pre-construction meeting.

S-21 (1717) AIR, LAND AND WATER POLLUTION

The provisions of Mn/DOT 1717 are supplemented and/or modified with the following:

S-21.1 **Discovery Of Contaminated Materials And Regulated Wastes**.

If during the course of the Project, the Contractor unexpectedly encounters any of the following conditions indicating the possible presence of contaminated soil, contaminated water, or regulated waste, the Contractor shall immediately stop work in the vicinity, notify the Engineer, and request suspension of work in the vicinity of the discovery area, in accordance with Mn/DOT 1803.4.

A documented inspection and evaluation will be conducted prior to the resumption of work. The Contractor shall not resume work in the suspected area without authorization by the Engineer.

(A) Indicators of contaminated soil, ground water or surface water include, but are not limited to the following:

(1) Odor including gasoline, diesel, creosote (odor of railroad ties), mothballs, or other chemical odor.
(2) Soil stained green or black (but not because of organic content), or with a dark, oily appearance, or any unusual soil color or texture.
(3) A rainbow color (sheen) on surface water or soil.

(B) Indicators of regulated wastes include, but are not limited to the following:

(1) Cans, bottles, glass, scrap metal, wood (indicators of solid waste and a possible dump)
(2) Concrete and asphalt rubble (indicators of demolition waste).
(3) Roofing materials, shingles, siding, vermiculite, floor tiles, transite or any fibrous material (indicators of demolition waste that could contain asbestos, lead or other chemicals).
(4) Culverts or other pipes with tar-like coating, insulation or transite (indicators of asbestos).
(5) Ash (ash from burning of regulated materials may contain lead, asbestos or other chemicals).
(6) Sandblast residue (could contain lead).
(7) Treated wood including, but not limited to products referred to as green treat, brown treat and creosote (treated wood disposal is regulated).

(8) Chemical containers such as storage tanks, drums, filters and other containers (possible sources of chemical contaminants).

(9) Old basements with intact floor tiles or insulation (could contain asbestos), sumps (could contain chemical waste), waste traps (could contain oily wastes) and cesspools (could contain chemical or oily wastes).

S-21.2 Mn/DOT 1717.2 A2 is hereby deleted and replaced with the following:

A2 During Construction

The Contractor shall implement the Project's Storm Water Pollution Prevention Plan. The Contractor shall schedule and install temporary and permanent sediment and erosion control measures, construct ponds and drainage facilities, finish earth work operations, place topsoil, establish turf, and conduct other Contract work in a timely manner to minimize erosion and sedimentation.

All exposed soil areas with continuous positive slopes that are within 60 m **(200 feet)** of a public water shall have temporary or permanent erosion protection within 24 hours after the construction activity in that portion of the site has temporarily or permanently ceased and connection is established to the public water. All other positive slopes to constructed surface waters, such as permanent storm water treatment ponds, curb and gutter systems, storm sewer inlets, temporary or permanent drainage ditches, or other storm water conveyance systems, shall have temporary erosion protection or permanent cover for the exposed soil areas as soon as practicable but no later than 14 days after construction activity has temporarily or permanently ceased in that area. For those drainage areas that have a discharge point within 1 mile and flows to an impaired or Special Waters shall have temporary erosion protection or permanent cover for the exposed soil areas as soon as practicable but no later than 7 days after construction activity has temporarily or permanently ceased in that area. Impaired and Special Waters are defined as those listed and referenced in the NPDES Permit.

Positive slopes adjacent to public waters and wetlands will be stabilized at the close of each day when weather forecasts for rain that evening, and/or overnight including weekends. Once work is completed it will be stabilized permanently as soon as practical but no later than seven days.

Exposed soil areas do not include; stockpiles or surcharge areas of sand, gravel, aggregate, concrete, bituminous, or road bed and surfacing material. A perimeter sediment barrier may be necessary to minimize loss when these are within the 60 m (200 feet) of existing surface waters or the property edge.

The bottom of temporary or permanent drainage ditches or swales constructed to drain water from a construction site must be stabilized with erosion control measures for the last 60 m **(200 feet)**, or more when conditions warrant, from the property edge or from the point of discharge to any existing surface water. Stabilization shall be completed within 24 hours after the construction activity in that portion of the ditch has temporarily or permanently ceased. Ditch stabilization will continue concurrently with construction activities but no later than 14 days after construction activities have permanently or temporarily ceased. Any, culvert pipe or storm sewer pipe that is within the cumulative distance is not part of this distance. Ditch checks may be provided where necessary to slow water flow and capture sediment.

Temporary or permanent ditches used as treatment systems will not need to be stabilized but must provide the proper Best Management Practices for the treatment system.

Pipe outlets shall be provided with temporary or permanent energy dissipation within 24 hours of connecting the pipe to any constructed or existing surface waters.

The Contractor shall limit the surface area of erodible soil that can be exposed to possible erosion at any one time when the permanent erosion control features are not completed and operative.

All liquid and solid wastes generated by concrete washout operations must be contained and not have the opportunity to come in contact with the surface waters or ground water. This includes the ditches, slopes to ditches, curb and gutter/storm sewer systems, and ponds. Areas where there are sandy soils, karsts, and high ground water the washout facility must have an impermeable liner. Liquid and solid wastes must be disposed of properly. A concrete washout sign must be installed adjacent to each washout facility to notify personnel.

S-21.3 Mn/DOT 1717.2E is hereby deleted and replaced with the following:

E Site Plans

The Engineer may require the Contractor to submit a site plan, in writing, detailing proposed erosion control and sediment control measures and a schedule indicating starting and completion times for construction operations working in water bodies and/or in direct proximity to waters of the state.

Contractor shall not start work in the affected areas until the schedule and site plan have been accepted by the Engineer and all materials and equipment for the activity are on site.

S-22 (1717) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

Pollution of natural resources of air, land and water by operations under this Contract shall be prevented, controlled, and abated in accordance with the rules, regulations, and standards adopted and established by the Minnesota Pollution Control Agency (M.P.C.A.), and in accordance with the provisions of Mn/DOT 1717, 1803.5 and the following:

S-22.1 Minnesota Pollution Control Agency General Permit, Authorization to Discharge Storm Water.

A. The Contractor shall furnish, install and maintain temporary and permanent erosion and sediment control devices in accordance with the provisions of 2105.5, 2573, 2575, as shown in the Plans, in accordance with the provisions of the Special Provisions Attachment "Minnesota Pollution Control Agency General Permit, Authorization to Discharge Storm Water", and the following:

The **City of Rochester** has applied for and received coverage under the above mentioned permit by signing both the Owner's and Contractor's certification blanks on the permit application. The City shall retain a photocopy of the original permit application. Upon award of the Contract, the City and the Contractor shall execute the Storm Water Permit Transfer/Modification Application form (attached to these Special Provisions) and submit it along with a photocopy of the original application to the Minnesota Pollution Control Agency. The Minnesota Pollution Control Agency, upon receipt of the Storm Water Permit Transfer Modification Application, will amend it to the original permit application thereby making both the City and the Contractor co-permittees for the requirements of the General Permit, "Authorization to Discharge Storm Water."

B. There is no fee for the transfer of the permit. Work may not begin until all transfer permit forms are signed and dated and the contractor identifies by name a person knowledgeable and experienced in the application and implementation of the Storm Water Pollution Prevention Plan, and has developed a chain of responsibility for all operators (subcontractors) on the site, in accordance to Part III.A.1 of the General Permit.

C. The Contractor shall be solely responsible for complying with the requirements of General Permit where Contractor is referenced in Part II.B.2: Permittee(s) for Parts II.B, II.C and IV.

The Contractor shall be responsible for providing all inspections, documentation, record keeping, maintenance, remedial actions, repairs required by the permit. All inspections, maintenance, and records required in the General Permit Part IV.E, Inspections and Maintenance, shall be the sole responsibility of the Contractor. The word "Permitee" in these referenced paragraphs shall mean "Contractor". Standard forms for logging all required inspection and maintenance activities shall be used by the Contractor. All inspection and maintenance forms used on this Project shall be turned over to the Engineer every two weeks for retention in accordance with Part IV.E, Inspections and Maintenance of the permit.

The Contractor shall have all logs, documentation, inspection reports on site for Engineer's review and shall post the permit on site. The Contractor shall immediately rectify any shortcomings noted by the Engineer. All meetings with the MPCA, Watershed District, WMO, or any local authority shall be attended by both the Engineer and the Contractor or their representatives. No work required by said entities, and for which the Contractor would request additional compensation, shall be started without approval from the Engineer. No work required

by said entities and for which the changes will impact the design or requirements of the Contract documents or impact traffic shall be started without approval from the Engineer.

The Contractor shall immediately notify the Engineer of any site visits by Local Permitting Authorities performed in accordance with Part V.H, Inspection and Entry.

D. If the Contractor fails to perform the requirements as listed herein, the Engineer will issue a Work Order detailing the required action. The Contractor shall start the required action within twenty-four (24) hour of receipt of the Work Order and continue the required action until the Project is brought into compliance with the permit. Failure to perform the required action as specified, shall subject the Contractor to a $1000/calendar day deduction.

The Contractor shall review and abide by the instructions contained in the permit package. The Contractor shall hold the City harmless for any fines or sanctions caused by the Contractor's actions or inactions regarding compliance with the permit or erosion control provisions of the Contract Documents.

S-23 (1803) PROSECUTION OF WORK

The provisions of Mn/DOT 1803 are supplemented and/or modified with the following:

S-23.1 **Construction requirements**

1. Contractor shall limit the construction activities to within the construction limits.
2. Contractor and Its employees shall not park equipment and/or private vehicles outside of the construction limits.
3. Contractor shall not remove roadways and driveways a distance greater than 200 feet in advance of the sanitary sewer work.

S-23.2 SPECIAL PROJECT ADA REQUIREMENTS

All pedestrian facilities and shared trails on this Project must be constructed according to Public Rights-of-Way Accessibility Guidelines (PROWAG) which can be found at: http://www.access-board.gov/prowac/draft.htm. The appropriate pedestrian ramp details for each quadrant are included in the Plan. The Engineer may provide additional details to those provided in the Plan that meet the PROWAG guidelines as the need arises and field conditions dictate.

(A) The Contractor must designate a responsible person familiar with PROWAG to assess proposed sidewalk layouts at each site before work begins. This person must be on site at all times that any work concerning pedestrian facilities is being performed.

(B) Pedestrian Access Routes must be constructed meet to the following criteria:

(1) Pedestrian Access Routes (PAR) must be constructed to meet the following:
- Minimum 4 feet width.
- A maximum cross slope of 2.0%.
- Vertical discontinuities must be less than 0.25 inches.
- Must provide positive drainage without allowing any ponding.

(2) Landings are part of the PAR and must be constructed to meet the following:
- 4 feet by 4 feet minimum width.
- Maximum slope of 2.0% in all directions.
- Required at all locations where the PAR changes directions.
- Must be connected to the PAR.

(3) Ramps are part of the PAR and must be constructed to meet either of the following criteria:
- Longitudinal slopes less than 5% in the direction of travel requires no landing at the top of the ramp (unless the PAR changes direction).

- Longitudinal slopes between 5 - 8.3% in the direction of travel require a landing at the top of the ramp.

(C) If the Contractor constructs any pedestrian or shared-use trail facilities that are not per Plan, do not meet the above requirements, or do not follow the agreed upon resolution, the Contractor shall be responsible for correcting the deficient facilities with no compensation paid for the corrective work. To ensure that the pedestrian facilities are constructed in compliance with PROWAG, the Contractor shall follow the following three steps:

(1) The Contractor shall use the appropriate ramp details in the Plan and identify the removal limits for the sidewalk and curb and gutter. If Contractor determines the removal limits are not adequate to meet PROWAG, the Contractor shall stop work immediately and consult the Engineer to determine the best solution. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may finish the removals.

(2) Prior to pouring each curb and gutter segment, the Contractor must verify the zero height curb and curb transitions will be located as shown in the Plans and will provide an adequate detectable edge as described in Section S-2531 (CONCRETE CURB AND GUTTER (ADA)) of these Special Provisions. The Contractor shall also verify the proposed curb flow lines will provide positive drainage as well as maintain existing gutter inflows/outflows. The curb and gutter shall be constructed as detailed in the Plan with a defined flowline and no vertical discontinuities. The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with pouring the curb and gutter.

(3) After the curb has been correctly poured, the Contractor has set the sidewalk forms, and prior to placing the concrete curb ramps/sidewalks, the Contractor shall verify the requirements in Section S-__.2B will be achieved. If any of these requirements cannot be met the Contractor shall meet with the Engineer to determine the best solution. Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may proceed with the curb ramp/sidewalk pour.

(D) It shall be the responsibility of the Contractor, or Contractor's Surveyor if applicable, to layout all proposed work at each intersection in accordance with the Plan and requirements listed in this Special Provision. The Contractor may confer with the Engineer for guidance in laying out the proposed work, but it will be the Contractor's responsibility to ensure the proposed work meets all the requirements of this Special Provision. This layout includes, but is not limited to placement of grade breaks, curb transitions, gutter flow lines, truncated dome placement, crosswalk marking placement, flares, landing limits, and ramp limits. It is important that the Contractor layout this work properly to achieve the construction of a compliant pedestrian facility. This layout work shall be incidental with no extra compensation paid.

(F) The Contractor shall round all joints and edges of the walk with a ¼ inch radius edging tool, contraction joints shall extend to at least 30 percent of walk thickness and shall be approximately 1/8 inch wide as per MnDOT 2521. The Contractor shall also have the option of providing saw cuts to construct the sidewalk joints. This work shall be considered incidental and no extra compensation paid.

S-24 (1806) DETERMINATION OF CONTRACT TIME AND INTERIM COMPLETION DATES

The contract time will be determined in accordance with the provisions of 1806 and the following:

S-24.1 Construction operations shall be started within eight (8) Calendar Days after the date of Notice of Contract Approval, whichever is later. Construction operations shall not commence prior to Contract Approval.

S-24.2 **Important Dates**

A. Crossing Permit: The requirement of a Department of Natural Resources (DNR) permit shall become a part of the construction requirements. The permit will be secured by the City. No

work may be performed in the creek until **May 14th, 2012**, pending DNR approval for the crossing.

S-24.3 **Interim Completion Dates**

Phase 1 - Civic Center Drive to 2nd Street	**July 20, 2012**
Phase 2 - 2nd Street from 8th Avenue to 11th Avenue	**September 14, 2012**
Phase 3 - 2nd Street from 11th Avenue to West End	**October 5, 2012**

All work required by the Contract through bituminous base and sod shall be completed by the dates specified. If the Contractor fails to complete each Phase of work by the dates specified the Contractor shall be subject to **Interim Liquidated Damages of $1,000 per calendar day for each Phase.**

S-24.4 **Final Completion Date**

All work required by these contract documents shall be completed no later than **October 12, 2012**.

If the Contractor fails to complete all work required by the Contract by the final completion date, the Contractor shall be subject to **Liquidated Damages of $2,000 per calendar day**.

The liquidated damages set forth in MnDOT 1807 and any monetary deductions as set forth above may apply equally, separately, and may be assessed concurrently.

S-25 INCIDENTAL WORK

Items of work for which no pay items are included in the bid proposal shall be considered as incidental expense and no separate payment will be made therefore. Incidental items include, but are not limited to the following:

Disposal of excess excavation.

Pipe bedding/foundation/encasement material unless in water table

Maintaining access to private property.

Trench Excavation for Storm Sewers

Trench Excavation for Sanitary Sewers located in the same vertical plane above trunk mains.

Reinforcing bars and dowels.

Bituminous Tack Coat.

Finish grading of boulevard and disturbed areas

Fine grading of subgrade and subgrade preparation

Preparation of aggregate base for paving

Shaping of earth berms for erosion control and drainage swales

Water & Dewatering

See also Siphon System lump sum item.

S-26 (2021) MOBILIZATION

The provisions of Mn/DOT 2021 are hereby deleted and replaced with the following:

S-26.1 DESCRIPTION

Mobilization shall consist of preparatory work and operations, including, but not limited to, those necessary for the movement of personnel, equipment, supplies and incidentals to the Project site; for the establishment of all Contractor's offices and buildings or other facilities necessary for work on the Project. Mobilization may include bonding, permit, and demobilization costs. When the proposal does not have a lump sum item for Mobilization, all costs incurred by the Contractor for Mobilization shall be incidental to other work.

S-26.2 BASIS OF PAYMENT

Based on the lump sum Contract price for mobilization, partial payments will be made as follows:

Mobilization Partial Payments		
	Pay Lesser of the Two	
% of Original Contract Amount Completed[1]	% of Mobilization	% of Original Contract Amount
5	50	3
15	75	5
25	100	5
95	100	N/A

[1] The Percent of Original Contract Amount Completed = the amount earned by the Contractor, excluding money earned for mobilization and material on hand, divided by the total value of the original contract (all bid items).

The total sum of all payments shall not exceed the original Contract amount bid for the mobilization item, regardless of the fact that the Contractor may have, for any reason, shut down work on the Project or moved equipment away from the Project and then back again.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

Item No.	**Item**	**Unit**
2021.501	MOBILIZATION	LS

S-27 (2101) CLEARING AND GRUBBING

Clearing and grubbing operations shall be performed in accordance with the provisions of Mn/DOT 2101 and the following:

S-27.1 **Burning or burying timber, stumps, roots or other debris will not be permitted.**

S-27.2 The first paragraph of Mn/DOT 2101.3D Disposal Limitations, is revised to read as follows:

The Contractor shall dispose of trees, brush, stumps, roots, and other debris or byproducts by chipping, marketing, ~~or burning~~. The Contractor:

S-27.3 Mn/DOT 2101.3D(5) under Disposal Limitations, is revised to read as follows:

(5) Shall not bury trees, brush, stumps, roots, and other debris or by-products within the State Right of Way or City Property.

S-27.4 Mn/DOT 2101.3D6 Burying, is hereby deleted in its entirety.

S-27.5 The first paragraph of Mn/DOT 2101.4B Area Basis, is revised to read as follows:

When the hectare is the unit, quantities will be determined by measuring (to the nearest 0.02 hectare **(0.05 acre)**) all areas cleared and all areas grubbed, within the limits shown in the Plans or staked by

the Engineer. All measurements will be made horizontally to points 3 m (**10 feet**) outside the trunks of qualifying trees or stumps on the perimeter of the area being measured. Separate areas smaller than 0.02 hectare (**0.05 acre**) will be considered to be 0.02 hectare (**0.05 acre**).

S-27.6 The first paragraph of Mn/DOT 2101.5 Basis of Payment, is revised to read as follows:

Payment for the accepted quantities of clearing and grubbing at the Contract prices per unit of measure will be full compensation for all removal and disposal costs, including the costs of securing outside disposal sites as needed and of carrying out the specified treatment in disposing of elm, oak wilt infected red oaks, pine, and marketable trees.

Item No.	Item	Unit
2101.502	CLEARING	TREE
2101.507	GRUBBING	TREE

S-28 (2104) REMOVING PAVEMENT AND MISCELLANEOUS STRUCTURES

Section 2104 is hereby supplemented to include the following:

The Owner shall have the option of removing and salvaging all items such as fences, gates, light standards, poles, etc. If the Owner does not remove such items prior to construction, they shall be removed by the Contractor and shall be considered incidental to the Contract unless specific bid items are included.

All debris and excess materials removed from the project shall be disposed of by the Contractor off the project site. No burying of debris will be permitted.

Sewers within the trenching limits shall be removed and sewers outside of the trench limits shall be plugged as shown in the plans

S-28.1 **Item 2104.501 "Remove Concrete Curb and Gutter"** Shall include the removal of existing curb and gutter as noted on the plans. Measurement and payment shall be made at the contract unit price per linear foot, which shall be compensation in full for all labor, equipment, and materials necessary to remove and dispose of the concrete curb and gutter including full depth saw cut to provide a clean edge.

S-28.2 **Item 2104.501 "Remove Sewer ..."** If no pay item is included then it is incidental to the project otherwise, shall include the removal of existing pipe, apron, or structure, by type, as noted on the plans. Measurement and payment shall be made at the contract unit price per linear foot or each, which shall be compensation in full for all labor, equipment, and materials necessary to remove and dispose of the work and shall include capping or plugging remaining abandoned pipe if any.

S-28.3 **Item 2104.503-5 "Remove Concrete Pavement, Drive, and Sidewalk"** Shall include the removal of existing concrete pavements as noted on the plans. Measurement and payment shall be made based on surface area and shall be compensation for the total depth of the concrete pavements at the contract unit price per square yard, which shall be compensation in full for all labor, equipment, and materials necessary to remove and dispose of the concrete pavements.

S-28.4 **Item 2104.505 "Remove Bituminous Pavement"** Shall include the removal of existing bituminous pavement **on 8th Ave NW,** as noted on the plans. Measurement and payment shall be made based on surface area and shall be compensation for the total depth of the bituminous pavement at the contract unit price per square yard, which shall be compensation in full for all labor, equipment, and materials necessary to remove and dispose of the bituminous pavement.

S-28.5 **Item 2104.505 "Remove Pavement"** Shall include the removal of existing bituminous and concrete base pavement **on 2nd St NW,** as noted on the plans. Measurement and payment shall be made based on surface area and shall be compensation for the total depth of the bituminous and concrete base

pavement at the contract unit price per square yard, which shall be compensation in full for all labor, equipment, and materials necessary to remove and dispose of the bituminous and concrete base pavement.

S-28.6 **Item 2104.509 "Remove Manhole and Catch Basin"** Shall include the removal of the existing storm or sanitary manholes and basins as noted on the plans. Measurement and payment shall be made at the contract unit price per each, which shall be compensation in full for all labor, equipment, and materials necessary to maintain service flow, plug, remove and dispose the entire structure.

S-28.7 **Item 2104.511/2521.603 "Sawing Concrete Pavement"** If no pay item is included then it is incidental to the project otherwise, shall include saw cutting of concrete paving along the removal line. Measurement and payment shall be made at the contract unit price per linear foot, which shall be compensation in full for all labor, equipment, and materials necessary to saw cut to provide a clean edge.

S-28.8 **Item 2104.513 "Sawing Bituminous Pavement"** If no pay item is included then it is incidental to the project otherwise, shall include saw cutting of bituminous paving along the removal line. Measurement and payment shall be made at the contract unit price per linear foot, which shall be compensation in full for all labor, equipment, and materials necessary to saw cut to provide a clean edge.

S-28.9 **Item 2104.509 "Remove Hydrant"** Shall include the removal of the existing hydrant as noted on the plans. If directed by the Engineer, all removed hydrants shall be delivered to Rochester Public Utilities at 4000 East River Road NE in Rochester, MN. Otherwise contractor shall dispose of hydrant at their expense. Measurement and payment shall be made at the contract unit price per each, which shall be compensation in full for all labor, equipment, and materials necessary remove and dispose the entire structure.

S-28.10 **Item W200.564 "Remove Watermain"** Shall include the removal of existing watermain as noted on the plans, temporary closing or maintaining flows shall be coordinated with the water department. Measurement and payment shall be made at the contract unit price per linear foot, which shall be compensation in full for all labor, equipment, and materials necessary to complete the work

S-28.11 **Item 2104.521 "Salvage Guardrail"** Shall include the salvaging of the guardrail, by type, as noted on the plans. Measurement and payment shall be made at the contract unit price per linear foot, which shall be compensation in full for all labor, equipment, and materials necessary to complete the work. Any damage to the rail units shall be repaired or replaced at the expense of the Contractor.

S-28.12 **Item 2104.523 "Salvage Sign"** Shall include the salvaging of the all the existing signs on a given post. Measurement and payment shall be made at the contract unit price per each post, regardless of the number of signs mounted on a post, which shall be compensation in full for all labor, equipment, and materials necessary to complete the work. Any damage to the signs or posts shall be repaired or replaced at the expense of the Contractor.

S-28.13 **Measurement and payment** for the removal and disposal of materials will be made only for those Items of removal work specifically included for payment as such in the Proposal and as listed in the Plans. The removal of any unforeseen obstruction requiring in the opinion of the Engineer equipment or handling substantially different from that employed in excavation operations, will be paid for as Extra Work as provided in Mn/DOT 1403.

Item No.	Item	Unit
2104.501	REMOVE SEWER PIPE (STORM)	L F
2104.501	REMOVE SEWER PIPE (SANITARY)	L F
2104.501	REMOVE CURB AND GUTTER	L F
2104.503	REMOVE CONCRETE SIDEWALK	S F

2104.505	REMOVE PAVEMENT	S Y
2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	S Y
2104.505	REMOVE CONCRETE PAVEMENT	S Y
2104.505	REMOVE BITUMINOUS PAVEMENT	S Y
2104.509	REMOVE MANHOLE	EACH
2104.509	REMOVE CATCH BASIN	EACH
2104.513	SAWING BIT PAVEMENT (FULL DEPTH)	L F
2104.521	SALVAGE GUARD RAIL	L F
2104.523	SALVAGE SIGN	EACH
W200.564	REMOVE HYDRANT ASSEMBLY	EACH
W200.564	REMOVE EXISTING WATERMAIN	L F

S-29 (2105) EXCAVATION AND EMBANKMENT

Roadway excavation and embankment construction shall be performed in accordance with the provisions of Mn/DOT 2105, except as modified below:

S-29.1 Mn/DOT 2105.2A2 Rock Excavation is revised to read as follows:

Rock excavation shall consist of all materials that cannot, in the Engineer's opinion, be excavated without drilling and blasting or without the use of rippers, together with all boulders and other detached rock each having a volume of 1 cubic meter **(1 cubic yard)** or more, but exclusive of those quantities that are to be paid for separately under the item of rock channel excavation.

S-29.2 The last paragraph in Mn/DOT 2105.3B Preparation of Embankment Foundation, is revised to read as follows:

Before backfilling depressions within the roadway caused by the removal of foundations, basements, and other structures, the Contractor shall enlarge the depressions as directed by the Engineer.

S-29.3 The first and second sentences in the second paragraph in Mn/DOT 2105.3D Disposition of Excavated Material, are revised to read as follows:

When the soils are so varied that selection and placement of uniform soils is not practical, the Contractor shall use disks, plows, graders or other equipment to blend and mix suitable soils to produce a uniform soil texture, moisture content and density; except that, all soils that contain 20 percent or more particles passing the 75 um **(#200)** sieve shall be blended, mixed and dried with a disk, within the entire upper 2 meters **(6 feet)** of embankment. The disk shall meet the requirements of 2123 N, Disk Harrow. A disk is also to be used below the upper 2 meters **(6 feet)** of the embankment fill area, if in the opinion of the Engineer, the Contractor is not producing a uniform soil texture.

S-29.4 The fifth paragraph in Mn/DOT 2105.3D Disposition of Excavated Material, is revised to read as follows:

Peat, muskeg, and other unstable materials that are not to be used in the roadbed embankments shall be deposited in the areas indicated in the Plans or elsewhere as approved by the Engineer. All other material that is considered unsuitable for use in the upper portion of the roadbed shall be placed outside of a 1:1 slope down and outward from the shoulder lines on fills under 10 m **(30 feet)** in height or outside of a 1 vertical to 1.5 horizontal slope down and outward from shoulder lines on fills over 10 m **(30 feet)** in height, or used to flatten the embankment slopes, or disposed of elsewhere as approved by the Engineer.

S-29.5 The second sentence in the eighth paragraph of Mn/DOT 2105.3D Disposition of Excavated Material, is revised to read as follows:

No stones exceeding 150 mm **(6 inches)** in greatest dimension will be permitted in the upper 1 m **(3 feet)** of the roadbed embankment.

S-29.6 The fourth to last paragraph in Mn/DOT 2105.3D Disposition of Excavated Material, which begins with "All combustible debris materials (stumps, roots, logs, brush, etc.) together with all..." is hereby deleted and replaced with the following:

All noncombustible materials other than soils (oversized rock, broken concrete, metals, plastic pipe, etc.) shall be disposed of in accordance with 2104.3C.

S-29.7 The ninth paragraph of Mn/DOT 2105.5 is hereby deleted and replaced with the following:

If the Proposal fails to include a bid item for rock excavation or rock channel excavation, and material is uncovered that is so classified, excavation of the rock will be paid for separately at the Contract price for common excavation or common channel excavation, plus an additional $26.00 per cubic meter **($20.00 per cubic yard)** . If no bid item is provided for common channel excavation, excavation of materials classified as rock channel excavation will be paid for at the Contract price for common excavation plus an additional $28.00 per cubic meter **($21.50 per cubic yard)**. Such stipulated prices for rock excavation will apply up to a maximum of 200 m3 **(260 cubic yards)** of excavation per item or to such quantity as may be performed by mutual consent prior to execution of an Extra Work agreement.

S-29.8 The eleventh paragraph of Mn/DOT 2105.5 is hereby deleted and replaced with the following:

(a) That portion of the additional excavation that is removed from below a plane parallel to and 5 m **(15 feet)** below the natural ground surface will be measured in 2 m **(5 foot)** depth zone increments and paid for separately at adjusted unit prices. The adjusted unit price will be equal to the Contract bid price for muck excavation plus $0.39 per cubic meter **($0.30 per cubic yard)** for the additional excavation within the 5-7 m **(15-20 foot)** depth zone and an additional $0.26 per cubic meter **($0.20 per cubic yard)** for each additional 2 m **(5 foot)** increment of depth beyond 7 m **(20 feet).**

S-29.9 Compaction of all embankment construction, including culvert backfills, shall be obtained by the "**Quality Compaction**" method described in Mn/DOT 2105.3F.

S-29.10 Excess soils and rock not used on the Project shall become the property of the Contractor and shall be disposed of outside of the Right of Way. No direct compensation will be paid for the preparation of an acceptable Disposal Plan or for Off-Project disposal of excess materials. Disposal sites shall be left in a well graded condition with all solid wastes and boulders adequately covered.

S-29.11 Measurement and Payment

Item No.	Item	Unit
2105.501	COMMON EXCAVATION (P)	C Y

S-30 (2105) DEWATERING

Subsurface exploration indicates dewatering may be required for this project as of the dates of the borings shown on the plans. It is known that the subsurface water levels fluctuate in this area due to climate changes or nearby construction.

Where Trench Dewatering is necessary, the Contractor shall be responsible for obtaining a Water Appropriation Permit from the Department of Natural Resources (DNR). The Contractor will also be responsible for obtaining all other necessary permits and approvals, as well as all fees and documentation associated with the permits.

The Contractor shall not discharge groundwater directly to existing drainage ways or culverts without permission from the Owner, Road Authority, and the DNR. Contractor shall construct suitable holding basins and rock check system for sediment and erosion control as incidental to the dewatering operations.

All costs incurred by the Contractor for dewatering shall be incidental to the project.

S-31 (2105) (3877) TOPSOIL BORROW

Topsoil Borrow shall be in accordance with the provisions of 2105 and 3138 except as follows:

Acceptance requirements will be based on the approval of the Engineer, and not by Table 3877-1 or 3877-2.

Item No.	Item	Unit
2105.525	TOPSOIL BORROW (CV) (P)	C Y

S-32 (2211) AGGREGATE BASE

Aggregate base courses shall be constructed in accordance with the provisions of Mn/DOT 2211 except as modified below:

9. **Item 2211.501 "Aggregate Base Class 5"** Shall include salvaging topsoil/stripping, placement, maintenance (free of washboards and holes) and removal of virgin Class 5 aggregates only (no recycled aggregates) for the temporary access road between 8-1/2 Avenue and the alley as shown on the plan sheets. Measurement and payment shall be made at the contract unit price per ton, which shall be compensation in full for all labor, equipment, and materials necessary construct, maintain (free of washboards and holes), and remove the temporary access road. Turf restoration will be paid for under the turf restoration items

S-32.1 **Item 2211.503 "Aggregate Base Class 5"** Shall include the placement of Class 5 or 7C aggregates for the roadway construction. Measurement and payment shall be made at the contract unit price per cubic yard placed, which shall be compensation in full for all labor, equipment, and materials necessary to complete the work.

S-32.2 Compaction shall be achieved by the **"Quality Compaction Method"** described in Mn/DOT 2211.3C.

S-32.3 The second sentence in Mn/DOT 2211.1 Description, is revised to read as follows:

The aggregate base shall be produced and placed under the Contractor's quality control program in accordance with the Mn/DOT Grading and Base Manual.

S-32.4 The last paragraph in Mn/DOT 2211. 3C2 Quality Compaction Method, is revised to read as follows:

The Engineer may elect to perform density tests as shown in the Mn/DOT Grading and Base Manual, as needed to assist inspection. The actual density obtained by testing the aggregate base must meet or exceed the requirements shown in 2211.3C1 Specified Density or 2211.3C3 Penetration Index Method in order to be acceptable.

S-32.5 The first sentence in Mn/DOT 2211.3F1 Gradation Control, is revised to read as follows:

The Contractor and/or aggregate producer shall be responsible for maintaining a gradation control program in accordance with the random sampling acceptance method described in the Mn/DOT Grading and Base Manual.

S-32.6 Mn/DOT 2211.3F2(d) under Acceptance Testing is hereby deleted and replaced with the following:

(d) Samples for gradation testing will be taken randomly by the Engineer prior to compaction, in accordance with the random sampling method described in the Grading and Base Manual.

S-32.7 Mn/DOT 2211.3F2(j) under Acceptance Testing, is revised to read as follows:

(j) One gradation sample will be taken from each sublot and tested. Payment will be based on the average results from the four sublot samples for each specified sieve.

S-32.8 The third paragraph after Mn/DOT 2211.3F2(k) under Acceptance Testing, is revised to read as follows:

A 5% price reduction will be assessed to both individual or averaged test lots for each test result that fails to meet specified gradations for sieve sizes not listed in Tables 2211-B and 2211-C by more than 2%. These price reductions are cumulative and shall be analyzed both separately and averaged by lot when applicable.

S-32.9 Table 2211-B in Mn/DOT 2211.3F2 Acceptance Testing, is hereby deleted and replaced with the following:

Table 2211-B
AGGREGATE BASE PAYMENT SCHEDULE
(4 Sublots/4 Samples)

% Passing Outside Specified Limits*		
4.75 mm **(#4)**, 2.00 mm **(#10)**, and 425 µm **(# 40)** Sieves	75 µm **(#200)** Sieve	Acceptance Schedule (Price Reduction)
1	0.1	5%
----------	0.2	6%
----------	0.3	9%
----------	0.4	11%
----------	0.5	14%
2	0.6	15%
> 2	> 0.6	Corrective Action

*Based on average of 4 tests
Price reductions for more than one failing sieve size shall be cumulative. The compensation due to the Contractor for the quantity of material represented by the failing test results shall be reduced by the sum of the respective percentages.
The Contractor does not have the option of taking a price reduction in lieu of complying with the Specifications.

S-32.10 The following is added to Table 2211-C in Mn/DOT 2211.3F2 Acceptance Testing:

Substantial compliance will be applied to no more than one test failure. Substantial compliance will be eliminated when two or more test failures occur and test failures meeting substantial compliance will be subject to the next higher price reduction. One sieve failure = one test failure. Test failures for each material type will be treated separately.

S-32.11 The following is added to Table 2211-D in Mn/DOT 2211.3F2 Acceptance Testing:

Substantial compliance will be applied to no more than one test failure. Substantial compliance will be eliminated when two or more test failures occur and test failures meeting substantial compliance will be subject to the next higher price reduction. Test failures for each material type will be treated separately.

S-32.12 Basis of Payment

All costs incurred by the Contractor for furnishing and installing Aggregate Base shall be incidental to other work.

Item No.	Item	Unit
2211.501	AGGREGATE BASE CLASS 5	TON
2211.503	AGGREGATE BASE (CV) CLASS 5 (P)	C Y

S-33 (2357) BITUMINOUS MATERIAL FOR TACK

The provisions of Mn/DOT 2357 are hereby deleted and replaced with the following:

S-33.1 **Description**

This work shall consist of the application of bituminous material (emulsion or liquid asphalt) on a bituminous or concrete pavement prior to paving a new lift of Hot Mixed Asphalt.

S-33.2 **Materials**

A Bituminous Material.....3151

The bituminous material for tack coat will be limited to one of the following kinds of emulsified asphalt. However, the Engineer may authorize the use of medium cure cutback asphalt (MC-250) during the early and late construction season when it is anticipated the air temperature may drop below 32 degrees Fahrenheit.

Allowable grades are as follows:

Emulsified Asphalt

Cationic CSS-1, CSS-1h

Cutback Asphalt

Medium Cure Liquid Asphalt..... MC-250

Only Certified Sources are allowed for use. Mn/DOT's Certified Source List is located at the following link: http://www.dot.state.mn.us/products/index.html.

S-33.3 **Construction Requirements**

A Restrictions

Tack coat operations shall be conducted in a manner that offers the least inconvenience to traffic, with movement in at least one direction permitted at all times without pickup or tracking of the bituminous material.

The tack coat shall not be applied when the road surface or weather conditions are unsuitable as determined by the Engineer. The daily application of tack coat shall be limited to approximately the area on which construction of the subsequent bituminous course can reasonably be expected to be completed that day.

B Equipment

The bituminous material shall be applied with a distributor meeting the requirements of 2321.3C1.

C Road Surface Preparations

At the time of applying bituminous tack coat material, the road surface shall be dry and clean and all necessary repairs or reconditioning work shall have been completed as provided for in the Contract and approved by the Engineer.

All objectionable foreign matter on the road surface shall be removed and disposed of by the Contractor as the Engineer approves.

Preparatory to placing an abutting bituminous course, the contact surfaces of all fixed structures and the edge of the in-place mixture in all courses at transverse joints and in the wearing course at longitudinal joints shall be given a uniform coating of liquid asphalt or emulsified asphalt, applied by methods that will ensure uniform coating.

D Application of Bituminous Tack Coat Material

Unless otherwise indicated in the plans or provisions, the bituminous tack coat material shall be applied within the application rates shown below in Table 2357.3-D as based on pavement type or condition and type of bituminous material. The Engineer shall approve the time and rate of application. Only a Mn/DOT certified asphalt emulsion supplier is allowed to dilute the emulsion. When diluted, the supplier shall provide asphalt emulsion diluted 1 part emulsion to 1 part water. Dilution of asphalt emulsion in the field is not allowed. The Engineer may waive the tack coat requirement when multiple lifts are paved on the same day.

Table 2357.3-D
Tack Coat Application Rates

Pavement Type or Condition	Application Rate, liter/square meter **[gallons/sy]**		
	Undiluted Emulsion SS-1, SS-1H, CSS-1, CSS-1H	Diluted Emulsion (1 part Emulsion to 1 part water)[1] SS-1, SS-1H, CSS-1, CSS-1H	MC Cutback[2] MC-250
New HMA	0.14 - 0.23 **[0.03 – 0.05]**	0.28 - 0.46 **[0.06 - 0.10]**	0.14 - 0.23 **[0.03 - 0.05]**
Aged HMA[3] or Un-milled PCC	0.23 - 0.37 **[0.05 - 0.08]**	0.46 - 0.69 **[0.10 - 0.15]**	0.23 - 0.37 **[0.05 - 0.08]**
Milled HMA or Milled PCC	0.32 - 0.46 **[0.07 - 0.10]**	0.64 - 0.92**[0.14 - 0.20]**	0.32 - 0.46 **[0.07 - 0.10]**

1- As provided by the asphalt emulsion supplier

2- When approved by the Engineer

3- Older than 1 year

The temperature of the bituminous material at the time of application shall be approved by the Engineer, within the limits specified following:

SS-1, SS-1H, CSS-1, CSS-1H ..... 21 to 71°C **(70 to 160° F)**

MC-250 ..... 74 to 104°C **(165 to 220° F)**

Unless otherwise directed, sand shall be spread on the newly tacked surface at pedestrian crossings.

S-33.4 **Method of Measurement**

A. Bituminous Material

Bituminous material used for tack coat will be measured at 15°C (60°F)

S-33.5 **Basis of Payment**

Bituminous material for tack coat will be incidental to Wear Course Mix.

S-34 (2301) CONCRETE PAVEMENT

Concrete Pavement shall be constructed in accordance with the provisions of Mn/DOT 2301 and as modified below:

S-34.1 Pavement Texture

Remove the third through fourth paragraphs of Mn/DOT 2301.3L and any other references to tining in the concrete pavement and replace with the following:

The texture achieved by the carpet drag shall be tested by the Concrete Paving Contractor in accordance with ASTM E 965-87, *"Test Method for Measuring Surface Macrotexture Depth Using a Sand Volumetric Technique"*, to ensure the texture is adequate for skid resistance. The test location will be determined by the Agency and at a point located transversely to fall in the outside wheelpath. The results of ASTM E 965-87 shall show an average texture depth of any lot, as defined below, shall have a minimum value of 1.00 mm **[1/25 inch]**. Any lot showing an average of less than 1.00 mm **[1/25 inch]** but equal to or greater than 0.80 mm **[1/32 inch]** will be

accepted as substantial compliance but the Contractor shall amend their operation to achieve the required 1.00 mm [**1/25 inch**] minimum depth. (It is not the intention of this tolerance to allow the Contractor to continuously pave with an average texture depth of less than 1.00 mm [**1/25 inch**]). Any lot showing an average texture depth of less than 0.80 mm [**1/32 inch**] shall require diamond grinding of the pavement represented by this lot to attain the necessary texture. Any individual test showing a texture depth of less than 0.70 mm [**1/36 inch**] shall require diamond grinding of the pavement represented by this test to attain the necessary texture of 1.00 mm [**1/25 inch**]. Limits of any failing individual test shall be determined by running additional tests at 30 m [**100 foot**] intervals before and after the failing test location. All testing of the surface texture shall be completed no later than the day following pavement placement.

A lot shall represent one days paving per driving lane. Lots shall be broken down into sublots representing 300 m [**1000 linear feet**] of pavement. Each lot shall have a minimum of 3 sublots. If production results in less than 3 sublots per day, the quantities shall be included in the next day of concrete production. All adjoining driving lanes shall be tested at the same location but shall be considered individual lots.

The test locations will be randomly chosen by the Agency and given to the Contractor. The location of the test shall be determined using a random number chart (or other approved method) and multiplying the random number by the 300 m [**1000 linear foot**] sublot size (Example: Random number (0.65) X 300 m [**1000 linear foot**] results in taking a sample from the load representing the 195 m [**650 linear feet**] from the previous sublot extents).

S-34.2 Mn/DOT 2301.3A6 shall be deleted and replaced with the following:

Where so indicated in the Plans or directed by the Engineer, a section of pavement shall be constructed of high early strength concrete at important road crossings, intersections, driveway entrances, or other locations where early use of the pavement may be required to accommodate traffic

Because of the accelerated rate of hardening of high early strength concrete, the Contractor shall take such extra precautions as necessary to ensure satisfactory finishing of these sections.

High early concrete is defined as a concrete mixture having a cementitious content greater than 356 kg/m^3 [**600 pounds per cubic yard**]. High early mixes shall be designed to provide a maximum water/cementitious ratio of 0.40 and a minimum flexural strength of 3450 kPa [**500 psi**] or a minimum compressive strength of 20.7 Mpa [**3000 psi**] in 48 hours. High early mixes may have up to 100 % portland cement unless the coarse aggregate is quartzite or gneiss than the special cementitious requirements shall apply as noted above. High early mixes are not eligible for incentive payments for water/cementitious ratio.

For the minor work such as fill-ins or other work not provided by the Contractor's primary concrete plant, the Contractor may choose to use a 3A41HE mix designed by Mn/DOT in lieu of the Contractor mix design requirement.

S-34.3 Paragraph 1 of Mn/DOT 2301.3H1c shall be deleted and replaced with the following:

Full-width vibrators shall operated between 60 (3600 VPM) and 117 Hz (7000 VPM) in concrete and between 70 (4150 VPM) and 133 Hz (8000 VPM) when checked in air. The vibrators may be either of the surface or internal vibration type. The vibrator impulses shall be delivered directly to the concrete and the intensity of vibration shall be sufficient to consolidate the concrete mass thoroughly and uniformly throughout its entire depth and width. The Contractor shall be allowed to increase the speed of the vibrators with the permission of the Engineer. Additional testing may be required as determined by the Engineer at no expense to the Agency.

S-34.4 Paragraph 2 of Mn/DOT 2301.3B shall be deleted and replaced with the following:

If the slipform method of construction is used, the base course from out to out of the paver treads shall be accurately fine graded to the required elevation by an approved fine grading machine

mounted on crawler treads. Base construction shall be completed and the required subgrade density obtained to a width at least 1.3 m **(4 feet)** beyond the outside edges of the pavement including any integrant curb before the fine grading is performed. The aggregate base shall have sufficient stability and firmness to support the fine grading equipment and slipform paver without any serious distortion of the alignment or grade line.

S-34.5 Mn/DOT 2301.3P1 is hereby deleted and the following substituted therefore:

2301.3P1 Workmanship and Quality

2301.3P1a Surface Requirements

2301.3P1a (1) Defective Pavement The Engineer will only accept pavement that meets the specified requirements within permissible tolerances for payment at the Contract bid prices. Pavement that fails to meet the minimum requirements when tested in the prescribed manner is considered defective. Defective pavement is subject to the provisions made herein for correction or adjusted payment. In addition, the concrete incorporated in the work is subject to 2461.

The Engineer shall determine the limits of each individual defective pavement area and, when such areas are subject to price adjustment, the area is computed to the nearest whole square meter [**square yard**], except that areas of less than 1 m^2 [**square yard**] are considered 1 m^2 [**square yard**]. The condition of each individual defective area of pavement is assessed based on the greatest deficiency within that area.

2301.3P1a (2) Random or Uncontrolled Cracking

If any random or uncontrolled crack occurs in concrete pavement, the Engineer may require replacement of the pavement or portions thereof or require repairs and/or may require a reduced payment. If the Engineer approves repair of the pavement, the Contractor shall repair the pavement using dowel bar load transfer techniques listed in the latest Department's Concrete Pavement Rehabilitation Standards/Details. The Contractor shall submit to the Engineer for approval, the specific standard technique intended for repair. After approval by the Engineer, the Contractor will perform replacement or repair work at no expense to the Department. The Contractor shall replace failed repairs at no expense to the Department. Acceptance of the repairs shall comply with the acceptance procedure for the pavement portion of the Project.

2301.3P1b Pavement Smoothness requirements **will not** apply on this Project.

Pavement smoothness will be checked by the 10 foot long, straight-edge method.

S-35 (2301) CONCRETE PAVING SPECIFICATIONS FOR SMALL JOBS

Concrete Pavement shall be constructed in accordance with the provisions of Mn/DOT 2301 and as modified below:

Payment for typical reinforcement bars around castings as shown on the plans shall be considered incidental to the concrete paving and no separate payment will be made therefore.

A token quantity of high-early strength concrete has been included in the project. High-early concrete shall be used at driveway and other areas as directed by the engineer to minimize disruptions, and not subject to the provisions of 1903.

Adjustment of water valve boxes to finish grade and installing City furnished survey monument castings shall be considered incidental to the paving and no separate payment will be made therefore.

Immediately following the paver, the surface shall be straight-edged with a minimum of 10 foot long, straight-edge to remove irregularities and score marks.

Concrete shall be cured by use of the membrane curing compound meeting the requirements of MnDOT 3754 and shall be considered incidental.

All Joint sealant shall conform to 3723, Concrete Joint and Crack Sealer (Hot-Poured Elastic Type Sealant). The location of transverse joints may be adjusted in the field by the Engineer. An increase in the number of transverse joints of up to 5% compared to the number shown on the plans, shall be considered incidental to concrete paving.

S-35.1 Definitions

For the purposes of concrete pavement, a concrete plant shall be understood to mean:

(a) A paving plant when concrete is hauled in dump or agitator trucks, or

(b) A certified ready-mix plant when concrete is hauled in revolving drum agitator trucks or transit-mix trucks.

(c) A primary concrete plant provides the majority of the concrete to a paving project. Only one primary concrete plant shall be allowed per project unless approved by the Engineer.

(d) A secondary concrete plant provides any minor work or fill-ins that are not provided by the primary concrete plant.

Paving concrete shall be understood to include concrete mainline, ramps, loops, integrant curb, and curb and gutter placed adjacent to the concrete mainline with the same mixture as used in the paving.

S-35.2 Mn/DOT 2301.2A is hereby deleted and replaced with the following:

A Concrete 2461

A1 Incentives/Disincentives

This Contract **does not include** concrete aggregate quality incentive/disincentive provisions.

S-35.3 Mn/DOT 2301.2A7a(3) Coarse Aggregate Gradation is replaced as follows:

All coarse aggregate for concrete pavement shall meet the gradation requirements of Mn/DOT 3137 CA-50.

Item No.	Item	Unit
2301.501	CONCRETE PAVEMENT	S Y
2301.511	STRUCTURAL CONCRETE	C Y
2301.529	REINFORCEMENT BARS (EPOXY COATED)	LB
2301.538	DOWEL BAR	EACH

S-36 (2301) DRILL & GROUT DOWEL BARS (EPOXY COATED)

Construction shall be in accordance with the provisions of Mn/DOT 2301, 3302 and these Special Provisions:

Furnish and install smooth, 1" diameter dowel bars, 18-inches in length, as shown on the plans. Drill with an approved jig. Place dowel with an approved non-shrink grout. Coat free end with a form coating material meeting Spec. 3902.

Bars shall be installed 9 inches into existing pavement.

Dowel bars shall be per 3302 and be epoxy coated.

Payment will be made under Item DRILL & GROUT DOWEL BAR (EPOXY COATED) and shall include compensation for all labor, materials and equipment necessary to furnish bars and install them into the existing pavement.

Item No.	Item	Unit
2301.602	DRILL & GROUT DOWEL BAR (EPOXY COATED)	EACH

S-37 (2301) DRILL AND GROUT REINFORCEMENT BARS (EPOXY COATED)

Construction shall be in accordance with the provisions of Mn/DOT 2301, 3301 and these Special Provisions:

Furnish and install No. 13 reinforcing tie bars, 18-inches in length, as shown on the plans. Place reinforcement with an approved non-shrink grout.

Bars shall be installed 9 inches into existing pavement.

Measurement will be made by the weight of reinforcement bars that are furnished, installed, and grouted in place as specified. Payment will be made under DRILL & GROUT REINF BAR (EPOXY COATED) at the Contract bid price per kilogram **[pound]**, which shall be payment in full for all costs incidental thereto.

Item No.	Item	Unit
2301.608	DRILL & GROUT REINF BARS (EPOXY COATED)	LB

S-38 (2360) PLANT MIXED ASPHALT PAVEMENT

Mn/DOT 2360 is hereby deleted from the Mn/DOT Standard Specifications and replaced with the 2360 (Plant Mixed Asphalt Pavement) Specification dated March 29, 2012 located http://www.dot.state.mn.us/materials/bituminousdocs/Specifications/2012/2360-2012.pdf and as modified below:

S-38.1 Mix Designation Numbers for the bituminous mixtures on this Project are as follows:

Roadways, Trails and Driveways:

TYPE SP 9.5 WEARING COURSE MIX (2,B)	SP WE A 2 30 B
TYPE SP 12.5 NON WEAR COURSE MIX (2,B)	SP NW B 2 30 B

S-38.2 The sentence "In addition to the list the above pavement surface must meet requirements of 2399 (Pavement Surface Smoothness) requirements." is deleted from **2360.3.E Surface Requirements** of the attached **2360 (Plant Mixed Asphalt Pavement) Specification**. Pavement smoothness requirements in Section S-2399 (PAVEMENT SURFACE SMOOTHNESS) of these Special Provisions **will not** apply on this Project.

S-38.3 **2360.3 D Compaction:** All compaction shall be by the **Ordinary Compaction Method** as described in 2360.3.D.2.

S-38.4 **Basis of Payment**

Payment for the accepted quantities of asphalt mixture used in each course at the Contract prices per unit of material shall be compensation in full for all costs of constructing the asphalt surfacing as specified, including the costs of furnishing and incorporating any asphalt binder, mineral filler, hydrated lime, or anti-stripping additives that may be permitted or required.

Apply reduced payment only when mixture includes steel slag as one of the aggregate proportions. If the production Marshall lab density at the recommended or established asphalt content is in excess of 2565 kg/m3 **[160 pounds per cubic foot]**, payment for mixture will be calculated at the following percent of the Contracted unit price.

% Payment = {100 - [{100 x (production density at design gyrations - 2565)} / 2565]}

% Payment = {100 - [{100 x (production density at design gyrations - 160)} / 160]} ENGLISH

In the absence of Contract items covering shoulder surfacing and other special construction, the accepted quantities of material used for these purposes will be included for payment with the wearing course materials.

The Contractor is responsible to complete yield checks and monitor thickness determinations so that the constructed dimensions correspond with the required Plan dimensions throughout the entire length of the Project. The tolerances for lift thickness shown in 2360.7A and B, Thickness and Surface Smoothness Requirement is for occasional variations and not for continuous over-running or under-running, unless ordered or Authorized by the Engineer.

Payment for plant mixed asphalt surface will be made on the basis of the following schedule:

Item No.	Item	Unit
2360.501	TYPE SP 9.5 WEARING COURSE MIX (2,B)	TON
2360.502	TYPE SP 12.5 NON WEAR COURSE MIX (2,B)	TON

S-39 (2461) STRUCTURAL CONCRETE

The provisions of Mn/DOT 2461 are modified in accordance with the following:

S-39.1 MnDOT 2461.3B shall be deleted and replaced with the following:

B Classification of Concrete

The Department will classify concrete by type, grade, consistency, and aggregate size. Refer to the mix number and Table 2461-2 to determine the mix requirements for each item of work.

Table 2461-2
Mix Number Identification

First Digit	Second Digit	Third Digit	Fourth Digit	Additional Digits
Type	Grade	Slump range	Coarse aggregate gradation range	Class A coarse aggregate when required, modified mix designation, or both

Refer to individual Contract items in the Standard Specification for Mix Numbers. Deviations from the specified Mix Numbers require coordination with the Concrete Engineer.

If the Contract does not show a concrete mix number, provide Type 3, Grade Y concrete with a slump and aggregate gradation determined by the Engineer.

The Department will designate grout by type and grade followed by the word "GROUT." Do not provide grout containing coarse aggregate. If the Plans do not show a type or grade for grout, provide 3A GROUT.

B1 Type Designation

Provide Type 1 or Type 3 concrete in accordance with Table 2461-3:

Table 2461-3
Concrete Type Designation

Concrete Type	Target Air Content*, %	Maximum Water/Cement Ratio‖
1	2.0	≤ 0.53 for 1A43 ≤ 0.68 for 1C62 ≤ 0.64 for 1C Grout
3	6.5 †	≤ 0.45†#

* For concrete mix design purposes only
‖ The water/cement ratio is defined as the ratio of the total water weight to the total cementitious weight.
† Unless otherwise required by 2301 or elsewhere in the Contract.
#The maximum water/cement ratio for machine placed concrete is 0.42.

B2 Grade Designation

The Department will designate concrete grade using a letter to represent the anticipated compressive strength and the minimum cementitious content in accordance with 2461.3C, "Cementitious Content," and Table 2461-4:

Table 2461-4 Concrete Grade Designation		
Concrete Grade	Type 1 Anticipated Compressive Strength, *psi [MPa]* *	Type 3 Anticipated Compressive Strength, *psi [MPa]* *
U	6,300 [43]	5,600 [39]
V	6,000 [41]	5,300 [37]
W	5,700 [39]	5,000 [34]
X	5,400 [37]	4,700 [32]
Y	5,000 [34]	4,300 [30]
A	4,500 [31]	3,900 [27]
B	4,100 [28]	3,400 [23]
C	3,200 [22]	2,700 [19]
* Anticipated minimum strength produced in accordance with the Department specifications and cured for 28 days under laboratory conditions.		

The Concrete Engineer, in coordination with the Engineer, may increase the cement content for concrete with test cylinder results less than the anticipated compressive strength in accordance with Table 2461-4, "Concrete Grade Designation." The Contractor may request an increase in the cement content as approved by the Engineer, in conjunction with the Concrete Engineer.

B3 Slump Designation

Refer to the slump designation for the upper limit of the slump range without a water reducer in accordance with Table 2461-5:

Table 2461-5 Slump Designation	
Slump Designation	Slump Range without Water Reducer, *in [mm]*
1	½ – 1 [12 – 25]
2	1 – 2 [25 – 50]
3	1 – 3 [25 – 75]
4	2 – 4 [50 – 100]
5	2 – 5 [50 – 125]
6	3 – 6 [75 – 150]

B4 Coarse Aggregate (CA) Designation

Refer to the coarse aggregate designation for the range of optional coarse aggregates gradations allowed in the mix in accordance with Table 3137-4, "Coarse Aggregate Designation for Concrete," and Table 2461-6:

Table 2461-6 Coarse Aggregate Designation for Concrete	
Range	Optional Coarse Aggregate Designation
0	CA-00 only
1	CA-15 to CA-50, inclusive
2	CA-15 to CA-60, inclusive
3	CA-35 to CA-60, inclusive
4	CA-35 to CA-60, inclusive
5	CA-45 to CA-60, inclusive
6	CA-50 to CA-70, inclusive
7	CA-70 only
8	CA-80 only

B5 Additional Designations

For mix designs that require a specified class of coarse aggregate as defined in 3137.2.B, an additional letter will follow the fourth digit of the Mix Number such as "A" (Class A Aggregate Requirement).

The Engineer may identify special concrete mix designations with additional letters following the last digit such as "HE" (High Early), "WC" (Water-Cement Ratio), "HPC" (High Performance Concrete), "MS" (Microsilica), or others.

S-39.2 MnDOT 2461.3E shall be deleted and replaced with the following:

E Concrete Admixtures 3113

The Contractor may use the following approved admixtures listed on the Approved Products list:

(1) Type A, "Water Reducing Admixtures,"

(2) Type B, "Admixtures Identified as Hydration Stabilizers," or

(3) Type S, "Viscosity Modifying Admixtures."

Use of any other admixtures in the concrete requires approval of the Concrete Engineer unless otherwise required by or allowed in the Contract.

When incorporating admixtures into the concrete:

1. Use admixture dosage rates recommended by the manufacturer.
2. Add all admixtures at the plant.
3. Provide admixture additions at the job site that are the same products as originally incorporated into the mix.
4. Use calcium chloride in concrete as approved by the Engineer, in conjunction with the Concrete Engineer. Do not use calcium chloride in units containing prestressing steel or in bridge superstructure concrete.

E1 Use of Additional Admixtures

On a case by case basis, the Engineer, in conjunction with the Concrete Engineer, will consider the use of the following admixtures, added either at the plant or at the job site, as listed on the Approved Products list:

(1) Type C, "Accelerating Admixtures"

(2) Type E, "Water Reducing and Accelerating Admixtures"

(3) Type F, "Water Reducing, High Range Admixtures"

(4) Type G, "Water Reducing, High Range and Retarding Admixtures"

E1a Delivery Time Beyond 90 Minutes

If the haul time does not facilitate mixing and placing the concrete within 90 minutes, perform the following procedures for pre-qualifying a concrete mix to extend the delivery time to 120 minutes. Extending the delivery time beyond 120 minutes will require additional testing at 30 minute intervals up to the maximum desired delivery time as directed by the Concrete Engineer.

(1) Provide a contractor mix design in accordance with 2461.3G2 for each combination of materials.

(2) Specification 2461.3D is modified to allow up to 25% fly ash replacement for cement. All other requirements of 2461 apply.

(3) Laboratory trial batching on the proposed mix includes the following testing requirements:

(a) Perform all laboratory trial batching at an AMRL accredited laboratory.

(b) Perform all plastic concrete testing after adding all admixtures to the concrete mixture.

(c) Perform slump, air content, unit weight and temperature testing immediately after batching and at 90 and 120 minutes.

(d) Fabricate concrete cylinders for compressive strength at 90 and 120 minutes (sets of 3) and cylinders for hardened air content testing at 90 and 120 minutes (sets of 5).

(e) Test the cylinders for compressive strength at 28 days.

(f) Determine the hardened air content (ASTM C457) at a minimum of 7 days. The Contractor is required to test at 2 samples representing 90 minutes and 2 samples representing 120 minutes and provide MnDOT with the other 6 samples for testing at their discretion. Retain any hardened concrete test specimens for a minimum of 90 days for MnDOT to examine at their discretion.

(g) Ensure the admixture manufacturer's technical representative is present during the trial batching.

(h) Contact the MnDOT Concrete Engineering Unit a minimum of 2 days prior to mixing. This same 2 day notification is required prior to any physical testing on hardened concrete samples.

(i) Once accepted by the Concrete Engineer, the laboratory trial batching is considered acceptable for use for 5 years, unless it is determined the material sources have changed significantly since the initial laboratory testing and acceptance. In all cases, the Engineer will require field trial batching on a project specific basis.

(4) Field trial batching on the proposed mix for each specific project shall include batching in the presence of the Engineer and the following:

(a) Provide a QC Plan for extending the delivery time beyond 90 minutes.

(b) Mix and transport the concrete using the same materials as were utilized in the laboratory trial batching.

(c) Batch a minimum 5 cu. yd (4 cu. m) of concrete utilizing the same methods intended for use when supplying concrete placed into the permanent work.

(d) Maintain the ready mix truck in transit; by either driving around the yard or on the roadway; and maintain the drum speed at 5 to 7 revolutions per minute for the entire 120 minutes.

(e) Perform all plastic concrete testing after adding admixtures to the concrete mixture.

(f) Perform slump, air content, unit weight and temperature testing at 90 and 120 minutes.

(g) Fabricate concrete cylinders for compressive strength at 90 and 120 minutes (sets of 3) and cylinders for hardened air content testing at 90 and 120 minutes (sets of 2).

(h) Test the cylinders for compressive strength at a minimum of 7 days.

(i) Determine the hardened air content (ASTM C457) at a minimum of 7 days. The Contractor is required to test 1 sample representing 90 minutes and 1 sample representing 120 minutes and provide MnDOT with the other 2 samples for testing at their discretion. Retain any hardened concrete test specimens for a minimum of 90 days for MnDOT to examine at their discretion.

(j) Incorporate the trial batch concrete into other work with the approval of the Engineer.

(k) The Contractor must demonstrate to the Engineer the ability to properly mix, control and place the concrete.

(5) The Concrete Engineer, in coordination with the Engineer, will review the trial batch results and all related concrete testing for compliance with the QC Plan and the Contract. Final approval of the mixture is based on satisfactory field placement and performance.

S-39.3 MnDOT 2461.3F shall be deleted.

S-39.4 MnDOT 2461.3G, 2461.3H, and 2461.3J shall be deleted and replaced with the following:

G Job Mix Proportions

G1 Department Designed

The Department will provide the estimated composition of concrete mixes unless otherwise required by the Contract.

The Department may adjust the mix composition of the concrete without adjusting the Contract unit price for any items of work.

G1a Concrete Yield

The Department defines concrete yield as the ratio of the volume of mixed concrete, less accountable waste, to the planned volume of the work constructed. The Department will not assume responsibility for the yield from a given volume of mixed concrete.

G1b High-Early Strength Concrete

When the Engineer requires high-early strength concrete, the concrete is designed in accordance with the following:

- Increasing the cement content of the concrete up to 30 percent and/or using an approved accelerator as allowed by the Engineer, in conjunction with the Concrete Engineer
- Using 100 percent portland cement unless allowed by the Contract or the Engineer
- A maximum cement content for a cubic yard [cubic meter] of concrete not to exceed 900 lb **[535 kg]**.
- A w/c ratio not to exceed 0.38 for Type 3 Concrete unless specified elsewhere in the Contract.

G2 Contractor Designed

Design the concrete mix based on an absolute volume of 27.00 cu. ft ± 0.10 cu. ft **[1.000 cu. m ± 0.003 cu. m]** for the following:

(1) Concrete paving mixes in accordance with 2301,
(2) Concrete mixes with an anticipated or required 28-day compressive strengths of at least 5,000 psi **[34 Mpa]**,
(3) Precast concrete in accordance with 2405, 2412, 3236, 3238, 3621, 3622, 3630, 3661, and 3667
(4) Colored concrete
(5) Stamped concrete
(6) Cellular Concrete Grout – Controlled Low Strength Material (CLSM)
(7) Extended Delivery Times Beyond 90 minutes
(8) Concrete as otherwise required by the Contract.

Submit the concrete mixes utilizing the MnDOT Contractor Mix Design Submittal Package available on the Department's website at least 21 calendar days before initial placement of the concrete mix. The Concrete Engineer will provide specific gravity and absorption data for mix design calculations.

The Concrete Engineer will review the mix design submittal and approve the materials and mix design for compliance with the Contract.

The Contractor assumes full responsibility for the mix design and performance of the concrete.

The Engineer determines final acceptance of concrete for payment based on satisfactory field placement and performance.

S-39.5 MnDOT 2461.4A2(c) shall be deleted and replaced with the following:

Do not place concrete when the air temperature at the point of placement is below 36 °F [2 °C] or is expected to fall below 36 °F [2 °C] within the following 24 h period unless approved cold-weather provisions are in-place. Discontinue concrete placement if the air temperature falls below 36 °F [2 °C].

S-39.6 MnDOT 2461.4A4a shall be deleted and replaced with the following:

A4a Consistency

The Engineer will test the concrete for consistency using the slump test during the progress of the work. The Department may reject concrete batches with consistencies outside of the slump range in accordance with Table 2461-10. If any test shows the slump in excess of the upper limit of the slump range, the Engineer will reject the concrete represented by that test unless the Contractor makes adjustments to the concrete before use.

Adjust the slump within the allowable range to optimize both placement and finishing.

If not using a Department approved Type A water reducer at the manufacturer's recommended dosage rates listed on the Approved Products list, meet the slump values for the slump range without water reducer in accordance with Table 2461-10.

If using a Department approved Type A water reducer at the manufacturer's recommended dosage rates listed on the Approved Products list, meet the slump values for the slump range with water reducer in accordance with Table 2461-10.

Table 2461-10
Slump Range Designation

Slump Designation	Slump Range without Water Reducer, *in [mm]*	Slump Range with Water Reducer, *in [mm]*
1	½ – 1 **[12 – 25]**	½ – 1 **[12 – 25]**
2	1 – 2 **[25 – 50]**	1 – 3 **[25 – 75]**
3	1 – 3 **[25 – 75]**	1 – 4 **[25 – 100]**
4	2 – 4 **[50 – 100]**	2 – 5 **[50 – 125]**
5	2 – 5 **[50 – 125]**	2 – 6 **[50 – 150]**
6	3 – 6 **[75 – 150]**	3 – 7 **[75 – 175]**

Contact the Engineer if encountering unusual placement conditions that render the specified slump range unsuitable. The Department will provide mix composition modifications to provide the desired change in consistency while maintaining the other specified properties of the concrete mix. Do not add water solely to temporarily facilitate the placement of concrete.

A4a(1) Concrete Placed by the Slip-Form Method
Place concrete that does not slough and is adequately consolidated at a slump value that optimizes placement for the designated mixture.

A4a(2) Non-Conforming Material
Only place concrete meeting the slump requirements in the work. If the Contractor places concrete not meeting the slump requirements into the work, the Engineer will not accept nonconforming concrete at the Contract unit price.

For concrete not meeting the required slump, the Engineer will make determinations regarding the disposition, payment, or removal. The Department will adjust the Contract unit price for the Contract pay item of the concrete in accordance with Table 2461-11A, 2461-11B, 2461-11C and 2461-11D. When there is not a separate Structural Concrete bid price for an item of work or the concrete is a minor component of the unit bid price, the Department will reduce payment based on a concrete price of $100.00 per cu. yd [$130.00 per cu. m] or Contractor-provided invoice amount for the concrete in question, whichever is less.

Table 2461-11A
General Concrete*

Outside of Slump Range	Adjusted Contract Unit Price
Below slump range*	The Department will pay 95 percent of the relevant Contract unit price for materials placed as approved by the Engineer.
≤ 1½ in **[40 mm]** above slump range	The Department will pay 75 percent of the relevant Contract unit price for materials placed as approved by the Engineer.
1¾ in **[45 mm]** – 2¼ in **[55 mm]** above slump range	The Department will pay 50 percent of the relevant Contract unit price for materials placed as approved by the Engineer.
> 2¼ in **[55 mm]** above slump range	The Department will pay 25 percent of the relevant Contract unit price for materials placed as approved by the Engineer
* If the Contractor places piling or footing concrete below the slump range, the Department will deduct $100 per cu. yd **[$130 per cu. m]** or a Contractor-provided invoice amount to the relevant Contract unit price of the concrete represented by the slump test, whichever is less. The Department will not reduce Contract unit price for low slump concrete placed with the slip-form method as approved by the Engineer.	

Table 2461-11B Bridge Deck Concrete	
Outside of Slump Range	**Adjusted Contract Unit Price**
Below slump range	The Department will pay 95 percent of the relevant Contract unit price for materials placed as approved by the Engineer.
≤ 1½ in [**40 mm**] above slump range	The Department will pay 75 percent of the relevant Contract unit price for materials placed as approved by the Engineer.
> 1½ in [**40 mm**] above slump range	The Department will pay 25 percent of the relevant Contract unit price for materials placed as approved by the Engineer.

Table 2461-11C Low Slump Bridge Deck Concrete From ½ in [12 mm] to 1 in [25 mm]	
Outside of Slump Range	**Adjusted Contract Unit Price**
Below slump range	No deduction for materials placed as approved by the Engineer
≤ ½ in [**12 mm**] above slump range	The Department will pay 50 percent of the relevant Contract unit price for materials placed as approved by the Engineer.
> ½ in [**12 mm**] – ¾ in [**20 mm**] above slump range	The Department will not pay for concrete placed but will allow the concrete to remain in place as approved by the Engineer.
> ¾ in [**20 mm**] above slump range	The Department will not pay for concrete. Provide additional testing as directed by the Engineer to determine if the concrete can remain or place or is subject to removal and replacement.

Table 2461-11D Low Slump Concrete — Patching From ½ in [12 mm] to 1 in [25 mm]	
Outside of Slump Range	**Adjusted Contract Unit Price**
Below slump range	No deduction for materials placed as approved by the Engineer
≤ ½ in [**12 mm**] above slump range	The Department will pay 75 percent of the relevant Contract unit price for materials placed as approved by the Engineer.
≥ ¾ in [**20 mm**] above slump range	The Department will pay 25 percent of the relevant Contract unit price for materials placed as approved by the Engineer.

S-39.7 MnDOT 2461.4A4b shall be deleted and replaced with the following:

A4b Air Content
Maintain the air content of Type 3 general concrete at the specified target of 6.5.percent ±1.5 percent of the measured volume of the plastic concrete in accordance 1503.

Make any adjustments immediately to maintain the desired air content.

Measure the air content at the point of placement but before consolidation.

A4b(1) Non-Conforming Material
Only place Type 3 concrete meeting the air content requirements in the work. If the Contractor places Type 3 concrete not meeting the air content requirements into the work, the Engineer will not accept nonconforming concrete at the Contract unit price.

For concrete not meeting the required air content, the Engineer will make determinations regarding the disposition, payment, or removal. The Department will adjust the Contract unit price for the Contract pay item of the concrete in accordance with Table 2461-17. When there is not a separate Structural Concrete bid price for an item of work or

the concrete is a minor component of the unit bid price, the Department will reduce payment based on a concrete price of $100.00 per cu. yd **[$130.00 per cu. m]** or the Contractor-provided invoice amount for the concrete in question, whichever is less.

General Concrete (Target Air Content 6.5%)	
Air Content, %	**Adjusted Contract Unit Price**
> 10.0	The Department will pay 75 percent of the relevant Contract unit price for the concrete represented for material placed as approved by the Engineer.
>8.0 – 10.0	The Department will pay 95 percent of the relevant Contract unit price for the concrete represented for material placed as approved by the Engineer.
5.0 – 8.0	The Department will pay 100 percent of the relevant Contract unit price for the concrete represented, for material placed as approved by the Engineer.
>4.0 – <5.0	The Department will pay 75 percent of the relevant Contract unit price for the concrete represented for material placed as approved by the Engineer.
>3.5 – 4.0	The Department will pay 25 percent of the relevant Contract unit price for the concrete represented and placed as approved by the Engineer. If the Engineer, in conjunction with the Concrete Engineer, determines the surface is exposed to freeze-thaw cycling, coat the concrete with an approved epoxy penetrant sealer from the MnDOT Approved Products list.
≤3.5	Remove and replace concrete in accordance with 1503, "Conformity with Plans and Specifications" and 1512, "Unacceptable and Unauthorized Work" as directed by the Engineer. If the Engineer, in conjunction with the Concrete Engineer, determines the concrete can remain place, the Engineer will not pay for the concrete and if the Engineer determines the surface is exposed to salt-brine freeze-thaw cycling, coat with an approved epoxy penetrant sealer from the MnDOT Approved Products list.

S-39.8 MnDOT 2461.4A5 shall be deleted and replaced with the following:

A5 Test Methods and Specimens
The Engineer will furnish molds for the test specimens in accordance with the following based on the maximum aggregate size:

(1) 4 in × 8 in **[100 mm × 200 mm]** cylinder molds,
(2) 6 in × 12 in **[150 in × 300 mm]** cylinder molds for maximum aggregate sizes greater than 1¼ in **[31.5 mm]**,
(3) 6 in × 6 in × 20 in **[150 in × 150 in × 500 mm]** beam molds, use other beam mold sizes as approved by the Engineer.

Provide curing tanks of adequate size and number for curing all of the concrete test specimens in accordance with 2031.3.C. Supply the curing tanks with heaters to maintain a water temperature of 73° F ± 3° F **[23° C ± 2° C]**.

If Contractor testing is required in the Contract, perform the following:

(1) Provide a MnDOT Certified Concrete Field 1 Technician to perform all Contractor Testing.
(2) Determine the required testing rates in accordance with the Schedule of Materials Control,
(3) Take samples after the first ¼ cu yd [cu. m] and before discharging the last ¼ cu. yd **[cu. m]** of the batch,
(4) Perform concrete sampling and testing meeting the requirements of the MnDOT Concrete Manual,
(5) Measure slump and air content, and make strength specimens when placing the concrete,
(6) Record field measurements, including strength specimen identifications on MnDOT Form 2448, *Weekly Concrete Report*, to provide to the Concrete Engineer.

The Engineer will transport the cylinders to the Agency laboratory for testing.

A5a Standard Strength Cylinders

The Department will perform the following for standard strength cylinders:

(1) Cast cylinders for testing at 28 days,
(2) Mark cylinders for identification of the represented unit or section of concrete,
(3) Cure the cylinders meeting the requirements of the MnDOT Concrete Manual, and
(4) Submit cylinders and a completed cylinder identification card to the Agency laboratory.

The Producer of precast units is responsible for casting standard strength cylinders.

A5b Control Strength Cylinders

The Engineer will use control cylinders to determine when the sequence of construction operations is dependent upon the rate of concrete strength development. The Engineer will cast enough control cylinders to determine when the concrete attains the required strength for all desired control limitations.

The Department will perform the following for control strength cylinders:

(1) Cast up to three (3) control cylinders. Any additional control cylinders are the responsibility of the Contractor,
(2) Cure the cylinders in the same location and under the same conditions as the concrete structure or unit involved meeting the requirements of the Concrete Manual,
(3) Mark control cylinders for identification of the represented unit or section of concrete, and
(4) Submit cylinders and a completed cylinder identification card to the Agency laboratory.

If the Agency is unavailable to test the control cylinders, the Contractor shall submit the control cylinders to an independent testing facility for testing or the Contractor may perform the testing on the control cylinders on a portable mechanical or hydraulic testing machine checked and calibrated with a standard proving ring as approved by the Engineer and in the presence of the Engineer.

The Producer of precast units is responsible for casting control strength cylinders.

A5c Strength Specimens for Concrete Paving

Use flexural beams to determine strength or provide cylinders as allowed by the Contract or approved by the Engineer.

Cast standard beams or cylinders for testing at 28 days.

Cast a sufficient number of control beams or cylinders to determine when the concrete attains the required strength for all desired control limitations.

Cure the standard beams or cylinders meeting the requirements of the MnDOT Concrete Manual.

Cure the control beams or cylinders in the same location and under the same conditions as the concrete structure or unit involved meeting the requirements of the MnDOT Concrete Manual.

The Engineer will test the flexural beams and record the results on MnDOT Form 2162, "*Concrete Test Beam Data.*"
If using cylinders, the Engineer will submit cylinders and a completed identification card to the Agency laboratory.

S-39.9 MnDOT 2461.4D1 shall be deleted and replaced with the following:

D Certified Ready-Mix Concrete

D1 Definition

The Department defines ready-mix concrete as one of the following:

(1) Central-mixed concrete proportioned and mixed in a stationary plant and hauled to the point of placement in revolving drum agitator trucks or a truck mixer, or
(2) Truck-mixed concrete proportioned in a stationary plant and fully mixed in truck mixers.

Commonly uses certified ready-mix terms are defined in the following:

Certified Ready-Mix Terminology	
Term	Definition
Mix design water	The maximum allowable water content for 1 cu. yd **[1 cu. m]** of concrete in accordance with MnDOT Form TP 02406, *Estimated Composition of Concrete Mixes*.
Total moisture factor	Factor used to determine total amount of water carried by a given wet aggregate.
Absorption factor	Factor used to determine the water contained within the pores of the aggregate and is held within the particles by capillary force.
Free moisture	The water that is carried on the surface of the aggregate that becomes part of the total water.
Batch water	Water actually batched into the truck by the batcher.
Total water	Batch water added to free moisture. Total water may also include the water used in diluting admixture solutions.
Temper water	Water added in mixer to adjust slump.
Total actual water	The water in the concrete mixture at the time of placement from any source other than the amount absorbed by the aggregate. It includes all batch water placed in the mixer, free moisture on the aggregate and any water added to the ready mix truck prior to placement.
Ready-Mix Producer or "Producer"	Party that is producing the concrete for the Contract. It is understood that the Ready-Mix Producer is the agent of the Contractor.

S-39.10 MnDOT 2461.4D2 shall be deleted and replaced with the following:

D2 General Requirements
Supply all ready-mix concrete from MnDOT Certified Concrete Plants in accordance with 2461.4D7.

The Engineer will reject ready-mix concrete delivered to the work site not meeting the specified requirements for delivery time, consistency, quality, air content, or other properties as unacceptable work in accordance with 1512, "Unacceptable and Unauthorized Work."

Provide batches for a delivered load of concrete in sizes of at least 1 cu. yd **[1 cu. m]**.

Handle washout water in accordance with 1717.

S-39.11 MnDOT 2461.4D3 shall be deleted and replaced with the following:

D2 Notice of Inspection
Notify the Engineer at least 24 h before beginning concrete production to allow the Engineer time to provide inspection forces needed for the work and to approve preparations for concrete placement. If the Contractor fails to provide 24 h notice, the Engineer may delay concrete placement in accordance with 1503, "Conformity with Plans and Specifications" and 1512, "Unacceptable and Unauthorized Work."
If the producer needs to change plants during placement, notify the Engineer and obtain approval before changing the plant.

S-39.12 The first two paragraphs of MnDOT 2461.4D5c shall be deleted and replaced with the following:

D5c Mixing In Truck Mixer

Charge the materials into the truck mixer drum by introducing sufficient water before adding solid materials. Perform charging operations without losing materials.

Leave the truck mixer at the plant site for a minimum of 5 minutes or 50 revolutions during the mixing period. Transport the concrete at agitating speed to the point of placement.

- MnDOT 2461.4D6 shall be deleted and replaced with the following:

If using a Department approved Type A, "Water reducing or Mid Range Water Reducing Admxiture" at the manufacturer's recommended dosage rates listed on the Approved Products list, meet the slump values for the slump range with water reducer in accordance with Table 2461-10.

D6 Delivery Requirements

Place concrete into the work in accordance with the following:

(1) Type 1 Concrete – within 90 minutes of batching, and
(2) Type 3 Concrete – within 90 minutes of batching when all admixtures are added at the plant at the manufacturer's recommended dosage rates listed on the Approved Products list. If the haul time does not facilitate mixing and placing the concrete within 90 minutes, test the concrete in accordance with 2461.3E1a.

In any case, do not add additional mixing water once the concrete is 60 minutes old.

Mix the load a minimum of 5 minutes or 50 revolutions at mixing speed after addition of any admixture.

The Contractor may transport Type 3 concrete in non-agitating equipment if the concrete is discharged within 45 minutes of batching.

Batch time starts when the batch plant or the transit mix truck adds the cement to the other batch materials.

D6a Field Adjustments

The Engineer will test the concrete for compliance with 2461.4A4a and 2461.4A4b according to the following:

(1) If the first test taken by the Engineer passes, the Engineer will resume verification testing according to the Schedule of Materials Control.
(2) If the first test taken by the Engineer fails, make adjustments and perform any quality control testing prior to the Engineer performing a final test. Acceptance or rejection of the truck is based on the Engineer's final test result.
(3) The Engineer will test up to 2 additional trucks according to 2461.4D6a(1) and 2461.4D6a(2).
(4) If the concrete is not within specification after the first 3 trucks, the Engineer will reduce their verification testing rate to once per truck for acceptance.
(5) Once the Engineer returns to normal verification testing according to the Schedule of Materials Control and a failing test occurs, the Engineer will repeat 2461.4D6a(2), 2461.4D6a(3) and 2461.4D6a(4).

S-39.13 MnDOT 2461.4D7 shall be deleted and replaced with the following:

D7 Certified Ready-Mix Plant Program

Provide ready-mix concrete produced by a certified ready-mix plant. Perform quality control of concrete production under a certification program for ready-mix concrete plants.

Complete all concrete plant documentation utilizing the Concrete Ready-mix Plant QC Workbook available from the MnDOT Concrete Engineering website. Electronically submit the QC Workbook to the Engineer by the Tuesday immediately following the previous week's production.

D7a Plant Certification

Before concrete production each season, ensure the producer performs the following:

(1) Performs an on-site inspection at the concrete plant with the Engineer who completes a MnDOT Form 2163, *Concrete Plant Contact Report.*
(2) Signs the report certifying compliance with the Certified Ready-Mix requirements and continual maintenance of the plant. The Engineer will also sign MnDOT Form 2163, *Concrete Plant Contact Report.*
(3) Provides a copy of the current MnDOT Concrete Manual and retain on-site.
(4) Equips the Certified Ready-Mix Plant with a working facsimile machine or an email address.
(5) Keeps plant reports, charts, and supporting documentation on file at the plant site for 5 calendar years.
(6) Provides electronic scales for weighing all materials.

D7b Sampling and Testing

Provide a MnDOT Certified Concrete Plant Level 2 Technician to oversee testing and plant operations and to remain on-site during concrete production or have cellular phone capability.

Provide facilities in accordance with 1604 for the use of the plant technician in performing tests.

Ensure the producer provides technicians with certification at least meeting MnDOT Concrete Plant Level 1 to perform all of the duties in accordance with the MnDOT Concrete Manual. The Engineer will provide technicians with certification at least meeting MnDOT Concrete Plant Level 1 to perform all of the duties in accordance with the MnDOT Concrete Manual.

Ensure the producer performs testing in accordance with the MnDOT Concrete Manual and determines testing rates meeting the requirements of the Schedule of Materials Control. The Engineer performs testing in accordance with the MnDOT Concrete Manual and determines testing rates meeting the requirements of the Schedule of Materials Control.

Take samples randomly using ASTM D 3665, Section 5.

Perform testing at the certified ready-mix plant site. Perform additional testing as directed by the Engineer. The Engineer may oversee the quality control sampling process.

Provide equipment and perform calibrations meeting the requirements of the following:

(1) AASHTO T 27, "Sieve Analysis of Fine and Coarse Aggregates,"
(2) AASHTO T 255, "Total Moisture Content of Aggregate by Drying,"
(3) AASHTO M 92, "Wire-cloth Sieves for Testing Purpose," and
(4) AASHTO M 231, "Weighing Devices Used in the Testing of Materials."

D7c Gradations and Aggregate Quality

Determine the gradation of the fine aggregates and the coarse aggregates as required by the Contract. Use mechanical shakers for sieve analysis of fine and coarse aggregates.

Identify quality control companion samples with the following information:

(1) Date,
(2) Test number,
(3) Time,
(4) Type of material,
(5) Plant, and
(6) Sampling location.

Document gradation results on MnDOT Form 2449, *Weekly Concrete Aggregate Report.*

Chart the results of all producer and Department gradation results of the coarse aggregate and the No. 8 [**2.36 mm**], No. 30 [**600 µm**], and No. 50 [**300 µm**] sieves of the fine aggregate.

The producer may request a reduction in testing rates as approved by the Engineer, in conjunction with the Concrete Engineer.

If the gradation tests on split samples from quality control or verification samples result in a variation between the producer and the Department greater than that set forth in the table below, the parties shall follow the procedures for test result dispute resolution available from the MnDOT Concrete Engineering website.

Allowable Variations on Percent Passing Sieves	
Sieve Size	**Allowed Percentage**
2 in [**50 mm**] – ⅜ in [**9.5 mm**]	± 6
No. 4 [**4.75 mm**] – No. 30 [**600 µm**]	± 4
No. 50 [**300 µm**]	± 3
No. 100 [**150 µm**]	± 2
No. 200 [**75 µm**]	± 0.6

D7c(1) Non-conforming Material

Only place concrete meeting the gradation requirements in the work. If the Contractor places concrete not meeting the gradation requirements into the work, the Engineer will not accept nonconforming concrete at the Contract unit price.

For concrete not meeting the required gradation, the Engineer will make determinations regarding the disposition, payment, or removal. The Department will adjust the Contract unit price for the Contract pay item of the concrete in accordance with Table 2461-9 and 2461-10. When there is not a separate Structural Concrete bid price for an item of work or the concrete is a minor component of the unit bid price, the Department will reduce payment based on a concrete price of $100.00 per cu. yd [**$130.00 per cu. m**] unless an invoice amount for the concrete in question is provided, whichever is greater.

Table 2461-7A **General Concrete for Individual Aggregate Fractions** **Fine and Coarse Aggregate Specification Sieves other than Fine Aggregate No. 200 [75 µm]**	
Outside of Specification, %	**Adjusted Contract Unit Price**
≤ 3	The Department will pay 98 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.
4 to 6	The Department will pay 95 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.

Table 2461-7A General Concrete for Individual Aggregate Fractions Fine and Coarse Aggregate Specification Sieves other than Fine Aggregate No. 200 [75 µm]	
Outside of Specification, %	**Adjusted Contract Unit Price**
7 to 10	The Department will pay 90 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.
> 10	The Department will pay 75 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.

Table 2461-7B General Concrete for No. 200 [75 µm] Sieve of Fine Aggregate	
Outside of Specification, %	**Adjusted Contract Unit Price**
≤ 0.3	The Department will pay 98 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.
0.4 to 0.6	The Department will pay 95 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.
0.7 to 1.0	The Department will pay 90 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.
> 1.0	The Department will pay for 75 percent of the relevant Contract unit price for concrete placed as approved by the Engineer.

If a failure occurs on the fine aggregate No. 200 **[75 µm]** sieve and on other sieves concurrently, the Department will only reduce the price based on the larger percentage deduction.

The Engineer, in conjunction with the Concrete Engineer, will determine adjusted Contract unit prices for coarse aggregate quality failures in accordance with 1503.

D7d Moisture Content

Ensure the producer performs the following:

(1) Determine the moisture content using the oven dry method in all fractions of the aggregate.
(2) Document moisture tests on MnDOT Form 2152, *Concrete Batching Report.*
(3) Chart the moisture content of each aggregate.

In addition to the oven dry moisture test, the producer may obtain the moisture content in the fine aggregate using a moisture probe.

To obtain approval for the use of a moisture probe, calibrate the moisture probe before each construction season meeting the requirements of the MnDOT Concrete Manual. Verify and chart both the probe moisture content and the oven-dry verification moisture test each week.

D7e Plant Diaries

Provide daily plant diaries in accordance with the MnDOT Concrete Manual using an approved form from the Department's website.

D7f Batch Weight Verification

The Engineer will observe the batching process to verify weights shown on the Certificate of Compliance.

The Engineer will observe the actual water batched during each collection of verification gradations in accordance with the following:

(1) Watching the ready-mix truck reverse the drum after washing,
(2) Verifying use of the current moisture test,
(3) Verifying that any additional water added to adjust the slump is recorded, and
(4) Validating water weights on the load batched and comparing the total water with the design water

The Engineer will document the actual water batched on MnDOT Form 24143, *Weekly Certified Ready-Mix Plant Report* and submit a copy to the Engineer to provide to the Concrete Engineer.

The Engineer will provide plant diaries in accordance with the MnDOT Concrete Manual.

D7g Certificate of Compliance

Provide a computerized Certificate of Compliance with each truckload of ready-mixed concrete at the time of delivery. The Department defines computerized to mean a document that records mix design quantities from load cells and meters.

If the computer that generates the Certificate of Compliance malfunctions, the Engineer may allow the Contractor to finish any pours in progress if the producer issues a handwritten MnDOT Form 0042, *Certificate of Compliance* with each load. Do not allow the producer to begin new pours without a working computerized Certificate of Compliance.

Provide a computerized Certificate of Compliance from the producer for each item of information, including the following:

(1) Name of the ready-mix concrete plant,
(2) Name of the Contractor,
(3) Date,
(4) State Project Number (SP) or (SAP),
(5) Bridge Number (when applicable),
(6) Time concrete was batched,
(7) Truck number,
(8) Quantity of concrete in this load,
(9) Running total of each type of concrete, each day for each project,
(10) Type of concrete (MnDOT Mix Designation Number),
(11) Cementitious materials using MnDOT Standard Abbreviations,
(12) Admixtures using MnDOT Standard Abbreviations
(13) Aggregate sources using 5 digit State Pit Numbers, and
(14) Admixture quantity fl. oz. per 100 pounds of cementitious **[mL per kg]** or oz per cu. yd **[mL per cu. m]**
(15) Batch information for materials using MnDOT standardized labels to represent each column shown in Table 2461-7C. Present the information in the order listed across the page (a through k) or print the information using two lines provided that the materials are identified in each line of information.

Table 2461-7C Standardized Certificate of Compliance Labels			
Category		**Formula**	**Standard Label**
a)	Ingredients (aggregate, cementitious, water, admixtures)	—	Ingredient
b)	Product Source (MnDOT Standard Abbreviation)	—	Source
c)	Total Moisture Factor (in decimals to 3 places)	—	MCFac
d)	Absorption Factor (in decimals to 3 places)	—	AbsFac
e)	MnDOT mix design oven dry (OD) weights, *lb/cu. yd [kg/cu. m]*	—	OD
f)	Absorbed moisture in the aggregates, *lb/cu. yd [kg/cu. m]*	(e × d)	Abs
g)	Saturated surface dry (SSD) weights for aggregates, *lb/cu. yd [kg/cu. m]*)	(e + f)	SSD
h)	Free moisture, *lb/cu. yd [kg/cu. m]*	(c - d) × e	Free Mst
i)	Target weights for one cubic yard [cubic meter] of concrete, *lb/cu. yd [kg/cu. m]*	(g + h)	CY Targ **[CM Targ]**
j)	Target batch weights, *lb [kg]*	(cu. yd × i) **[cu. m x i]**	Target
k)	Actual batch weights, *lb [kg]*	—	Actual
NOTE: Actual cubic yards **[cubic meters]** batched may vary due to differences in air content, weight tolerances, specific gravities of aggregates, and other variables.			

(16) Total Water (Batch Water + Free Moisture) in pounds [kilograms]

(17) Water available to add [(Mix Design Water) × (Target CY (CM)) – Total water] in gallons **[liters]**

(18) Space to note the water adjustment information, including:

(18.1) Water in gallons **[liters]** added to truck at plant filled in by producer, enter zero (0) if no water is added.

(18.2) Water in gallons **[liters]** added to truck at the jobsite filled in by producer or Engineer, enter zero (0) if no water is added.

(18.3) Total actual water in pounds **[kilogram]** (Total Water from Certificate of Compliance plus any additions).

(19) The following information printed with enough room beside each item to allow the Engineer to record the test results:

(19.1) Air content,
(19.2) Air temperature,
(19.3) Concrete temperature,
(19.4) Slump,
(19.5) Cylinder number,
(19.6) Location or part of structure,
(19.7) Time discharged, and
(19.8) Signature of Inspector.

(20) Location for the signature of the MnDOT Certified Plant 1 Technician representing the Producer. The technician will review the first Certificate of Compliance for each mix type, each day, for accuracy and hand sign the Certificate of Compliance at a location designated for signature signifying agreement to the terms of this policy and to certify that the materials itemized in the shipment comply with the specifications and plans.

D7h Decertification

If the Contractor provides concrete from a plant that cannot produce concrete that fails to perform testing, report accurate results, or complete required documentation, the Engineer may reject the concrete as unacceptable in accordance with 1503, "Conformity with Plans and Specifications" and 1512, "Unacceptable and Unauthorized Work.".

The Concrete Engineer, with coordination from the Engineer, may decertify the plant and halt production of concrete if the producer performs the following:

(1) Procedural changes made after the completion of the Concrete Plant Contact Report and after starting the work that cause non-compliance with the program,

(2) Continually produces concrete in non-compliance with this section,

(3) Completely disregards the requirements of this section, and
(4) Submits fraudulent test reports

If decertifying the plant, the Concrete Engineer may perform the following:
(1) Revoke plant certification.
(2) Revoke technician certification for individuals involved,
(3) Revoke bidding privileges as determined by the Construction Engineer, and
(4) Criminal prosecution for fraud as determined by the Attorney General.

S-40 (S100) TRENCH EXCAVATION

Trench Excavation and embankment construction shall be performed in accordance with the provisions of T100 except as modified below:

S-40.1 **Bedding and Encasement material (B&E)** shall be according to T100 and the following:

1. in water table areas (B&E) shall be according to City spec T100.206.
2. in non-water table areas (B&E) shall be according to City spec T100.207.
3. All work shall be performed as incidental to the sewer construction, for which no direct payment will be made.

S-40.2 **Anti seep collars** shall be placed at least once between each set of manholes, consisting of using the existing clay material 2ft thick around the pipe zone as an incidental expense.

S-40.3 **Rock Excavation** removed from the trench shall be paid as rock excavation.

Blasting of rock is not allowed on the project due to the proximity of the telephone ductbank. Rock shall be excavated by hammering means only.

If sandstone is encountered, Trench Excavation of sandstone will not be considered for payment as Solid Rock Excavation unless the Contractor can demonstrate that extraordinary measures are required to complete the trench work. Extraordinary measures would include ripper-tooth on a bulldozer. Excavation by backhoe with a rock-teeth bucket will not be considered an extraordinary measure. The need for a larger backhoe to perform the limestone excavation will not be considered an extraordinary measure.

MN/DOT Class 5 bedding and pipe encasement is required in the rock cut areas as an incidental expense.

S-40.4 **Granular Material for Backfill and Aggregate for Pipe Foundation**

A quantity of Granular Material for Backfill, and Aggregate for Pipe Foundation have been provided to be placed only as directed by the City to stabilize trenches in the event that unforeseen geology or other stability issues are encountered. Payment for these items shall include disposal of all displaced material.

S-40.5 **Trench Box** the Contractor is advised that the use of trench box (or boxes) shall be necessary on parts of this project. Use of trench box (or boxes) is considered incidental to the pipe installation. Contractor will be responsible for removing the trench box in such a way so as to prevent cave-ins of the trench walls before pipe bedding and backfill in the pipe zone has been acceptably placed and compacted. Contractor also must take measures to prevent the inplace pipe from moving or deflecting when the trench box is removed.

S-40.6 **Basis of Payment**

Trench excavation shall cover cost of trench excavating, backfilling and compaction of backfill to original grade.

Trench excavation shall be incidental for:

a) Storm Sewers
b) Sanitary Sewers located in the same vertical plane above trunk mains.

Item No.	Item	Unit
S100.501	TRENCH EXCAVATION FOR PIPE 24IN & UNDER __FT TO __FT DEEP	L F
S100.502	TRENCH EXCAVATION FOR PIPE OVER 24IN __FT TO __FT DEEP	L F
S100.507	SOLID ROCK EXCAVATION	C Y
S100.510	GRANULAR MATERIAL FOR BACKFILL (LV)	C Y
S100.511	AGGREGATE FOR PIPE FOUNDATION GRADATION A	C Y
W200.501	TRENCH EXCAVATION FOR PIPE 14IN & UNDER __FT TO __FT DEEP	L F
W200.502	TRENCH EXCAVATION FOR PIPE OVER 14IN __FT TO __FT DEEP	L F
W200.510	GRANULAR MATERIAL FOR BACKFILL	C Y
W200.511	AGGREGATE FOR PIPE FOUNDATION GRADATION A	C Y

S-41 (S100 & 2501-6) STORM SEWER

This work consists of constructing storm sewers in accordance with the applicable Mn/DOT Standard Specifications and in accordance with The City of Rochester Standards for Street and Utility Construction:

S-41.1 **Sewer pipe and aprons** of each design designation will be measured by length along the line of pipe or each. Terminal points of measurement will be the pipe end at free outlets; the point of connection with inplace pipe; the center of manholes or catch basins; the point of centerline intersections at branch fittings; or the point of juncture with other appurtenances or units as defined

S-41.2 **Adjust Drainage Structure** Manholes to be adjusted from existing to proposed street elevation that can be accommodated by the addition or removal of adjusting rings, with a maximum of 12" of adjusting rings allowable, shall be considered under the pay item "Adjust Drainage Structure" and paid for accordingly.

S-41.3 **Casting Assembly** of each design will be measured by number of each installed. Payment for Casting Assembly at the appropriate Contract prices will be compensation in full for all costs of the work. This work includes, but is not limited to removing the existing casting and adjusting rings, furnishing and installing the new casting with adjusting rings set to the new elevation on the existing structure.

S-41.4 **Adjust Frame and Ring** Catch Basins to be adjusted from existing to proposed street elevation that can be accommodated by the addition or removal of adjusting rings, with a maximum of 12" of adjusting rings allowable, shall be considered under the pay item "Adjust Frame & Ring Casting" and paid for accordingly.

S-41.5 **Reconstruct Drainage Structure** Structures to be adjusted from existing to proposed elevation that cannot be accommodated by the addition or removal of adjusting rings, or those manholes to be adjusted over 12" shall be considered under the pay item "Reconstruct Drainage Structure" and paid for accordingly.

S-41.6 **Construct Drainage Structure Design Spec ___** of each design will be measured by number of each constructed complete-in-place, including the base and castings as required, for the depth

increments as stated in the proposal. Payment for constructing structures at the appropriate Contract prices will be compensation in full for all costs of the work.

S-41.7 **Connect into Existing Drainage Structure** will be made by the number of connections constructed as specified. Payment will be at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto, including but not limited to, all materials and labor necessary to connect the proposed drainage structure to the existing storm sewer pipe. Any damage caused to the existing storm sewer pipe shall be repaired at no expense to the Department and to the satisfaction of the Engineer.

S-41.8 **Connect into Existing Sewer** will be made by the number of connections constructed as specified. Payment will be at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto, including but not limited to, all materials and labor necessary to connect the proposed sewer. Any damage caused to the existing sewer pipe shall be repaired at no expense to the Department and to the satisfaction of the Engineer.

S-41.9 **Basis of Payment**

Trenching, Bedding, Encasement and Backfill material for each type of pipe shall be according to the manufacturers' recommendations for pipe installations in a roadway section or T100, whichever is more stringent. All costs of furnishing and placing the pipe installation materials shall be considered incidental to the installation of the pipe.

Item No.	Item	Unit
2506.522	ADJUST FRAME & RING CASTING	EACH
2506.602	ADJUST DRAINAGE STRUCTURE	EACH
S100.516	FURNISH & INSTALL __IN REINFORCED CONCRETE PIPE CLASS __	L F
S100.545	CONSTRUCT STRUCTURE TYPE __ __FT TO __FT DEEP	STR
S100.545	CONSTRUCT STRUCTURE TYPE 4 (__IN) __FT TO __FT DEEP	STR

S-42 (S100 & 2503-6) SANITARY SEWER

This work shall consist of furnishing and installing polyvinyl chloride (PVC) pipe and fittings in accordance with the Plans, and in accordance with The City of Rochester Standards for Street Construction.

S-42.1 **Maintenance of Service**

Disruption of Sanitary flows during the construction of this project shall be kept to a minimum and considered incidental to the project.

If the Contractor sequences the project so bypassing pumping is required the following provisions shall be followed. The Contractor shall submit a plan detailing the necessary bypasses needed for each stage of construction. Bypass pumping and piping, temporary wiring, and all other items are the responsibility of the Contractor. Contractor shall be responsible for setting up and maintaining bypass pumping operations. Contractor shall coordinate bypassing plan with Owner. Existing flows in gravity sewer at 11th Ave. and 2nd St are approximately 0.5 to 1 million gallons per day (MGD) for average day and 1.5 to 2.5 MGD for wet weather.

Services shall not be disrupted for more than 4 hours. All service connection work will be accomplished and coordinated with the residences and businesses served. This may require temporary bypasses in these areas.

The City of Rochester and all affected property owners and residents shall be notified a minimum of 48 hours prior to disruption of service.

S-42.2 **Abandon Pipe Sewer** shall include plugging the remaining pipe ends with concrete and filling the entire line with sand or a lean concrete mix, measured by length along the line of pipe regardless of

diameter. Terminal points of measurement will be the point of connection with inplace pipe; the center of manholes; the point of centerline intersections at branch fittings; or the point of juncture with other appurtenances or units as defined.

S-42.3 **Sewer pipe** of each design designation will be measured by length along the line of pipe. Terminal points of measurement will be the point of connection with inplace pipe; the center of manholes; the point of centerline intersections at branch fittings; or the point of juncture with other appurtenances or units as defined

S-42.4 **Structures** of each design will be measured by number of each constructed complete-in-place, including the base, waterproofing, and castings as required, for the depth increments as stated in the proposal. All sections of manhole shall be PVC lined and joints PVC welded. The manhole inverts shall be epoxy coated in the field 72 hours after High Early otherwise 28 days if constructed with standard concrete mix. Payment for constructing manholes at the appropriate Contract prices will be compensation in full for all costs of the work.

S-42.5 **Adjust Frame and Ring** Manholes to be adjusted from existing to proposed street elevation that can be accommodated by the addition or removal of adjusting rings, with a maximum of 12" of adjusting rings allowable, shall be considered under the pay item "Adjust Frame and Ring" and paid for accordingly.

S-42.6 **Reconstruct Manhole** Manholes to be reconstructed from existing to proposed street elevation that cannot be accommodated by the addition or removal of adjusting rings, or those manholes to be adjusted over 12" shall be considered under the pay item "Reconstruct Manholes".

S-42.7 **Basis of Payment**

Trenching, Bedding, Encasement and Backfill material for each type of pipe shall be according to the manufacturers' recommendations for pipe installations in a roadway section or T100, whichever is more stringent. All costs of furnishing and placing the pipe installation materials shall be considered incidental to the installation of the pipe.

Item No.	Item	Unit
S100.520	FURNISH & INSTALL 15IN ALTERNATE PIPE SEWER	L F
S100.545	CONSTRUCT OUTSIDE MANHOLE DROP	STR
S100.545	CONSTRUCT STRUCTURE TYPE __ (___IN) __FT TO __FT DEEP	STR

S-43 (S100) SIPHON SYSTEM

The work to be performed under these specifications includes the furnishing of all labor, materials, equipment and services necessary for and incidental to the proper installation of sanitary sewer siphon including manhole structures and appurtenances, HDPE piping, siphon creek crossing, and related erosion control and site work.

S-43.1 **HDPE Pressure Pipe**

References

ANSI – American National Standards Institute

ASTM – American Society for Testing and Materials

FS – Federal Specifications

ISO – International Standards Organization

Materials

A. The pipe shall be made from materials meeting the designation of PE3408 as assigned by the Plastics Pipe Institute. The resin material shall meet the specifications of ASTM D3350-02 with a minimum cell classification of PE345464C.

B. The pipe shall contain no recycled compound except that which is generated in the manufacturer's own plant, from resin of the same specification and from the same raw material supplier.

Manufacture and Construction

A. Pipes: Pipe shall be manufactured from a PE 3408 resin listed with the Plastic Pipe Institute (PPI) as TR-4. Pipe shall have a manufacturing standard of ASTM D3035 and be manufactured by an ISO 9001 certified manufacturer.

B. Joints: Unless otherwise specified, all joining of pipe and fittings shall be fusion butt welds except where noted on plans.

C. Fittings: Flanges, elbows, reducers, tees, wyes, laterals and other fittings shall be capable of withstanding all operating conditions where installed. Butt fusion fittings shall be in accordance with ASTM D3261 and shall be manufactured by injection molding, a combination of extrusion and machining, or fabricated from HDPE pipe conforming to this specification. All fittings shall be pressure rated to provide a working pressure rating no less than that of the pipe. Fabricated fittings shall be manufactured using a McElroy Datalogger to record fusion pressure and temperature. A graphic representation of the temperature and pressure data for all fusion joints made producing fittings shall be maintained as part of the quality control. The fittings shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions, voids, or other injurious defects. All elbow fittings shall be HDPE and 11.25 deg. All fittings shall be prefabricated as manufactured by ISCO Industries or equal. Elbows fabricated in the field will not be accepted.

D. Flanged Fittings: HDPE flange adaptor fittings shall be used on siphon piping where noted on plans. HDPE flange adaptors shall be made from the same resin grade (PE3408) and shall be formed using extrusion or molding methods. Flanged fitting backup rings and bolts shall be stainless steel, Class 150. Flange assembly gaskets shall be 1/8" thickness. HDPE flanges shall be joined to HDPE pipe prior to installation.

Dimensions

A. Diameters: The actual outside diameter of the pipes and fittings shall be in ductile iron pipe sizes (DIPS) for HDPE. The minimum interior diameter of the pipes shall be 10.7 inches.

B. Wall Thickness: The nominal wall thickness shall be DR 11, rated for 160 psi working pressure.

Testing

A. Pipes: Pipes shall be manufactured and tested in accordance with ASTM F714.

B. Joints: Butt fusion fittings shall be in accordance with ASTM D3261.

Customer Inspection

C. The Owner or other designated representative shall be entitled to inspect pipes or witness the pipe manufacturing.
D. Manufacturers Notifications to Customer: Should the Owner request to see specific pipes during any phase of the manufacturing process, the manufacturer must provide the Owner with adequate advanced notice of when and where the production of those pipes will take place.

Packaging, Handling, Shipping

E. Packaging, handling, and shipping shall be done in accordance with the manufacturer's instructions.

Sections of pipe having been discovered with cuts or gouges in excess of 10% of the pipe wall thickness shall be cut out and removed. The undamaged portions of the pipe shall be rejoined using the heat fusion joining method.

Fused segments of the pipe shall be handled so as to avoid damage to the pipe. Chains or cable type chokers must be avoided when lifting fused sections of pipe. Nylon slings are preferred. Spreader bars are recommended when lifting long fused sections.

Installation

F. Burial: Bedding is incidental to the HDPE pipe. Embedment materials shall be MnDOT Class 5 Aggregate. The embedment material shall have an installed density of at least 90% Standard Proctor Density through compaction or consolidation. The pipe bedding shall be constructed in accordance with ASTM D2321, Section 5, Table 2.

G. Pipe Handling: Use textile slings, other suitable materials or a forklift. Use of chains or cables is not recommended.

H. Jointing: All joining of pipe and fittings shall be fusion butt welds except where noted on plans. Sections of polyethylene pipe should be joined into continuous lengths on the jobsite above ground. The joining method shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. The butt fusion equipment used in the joining procedures should be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, temperature requirements of 400 degrees Fahrenheit, alignment, and an interfacial fusion pressure of 75 PSI. The butt fusion joining will produce a joint weld strength equal to or greater than the tensile strength of the pipe itself. All field welds shall be made with fusion equipment with a McElroy Data Logger. Temperature, fusion pressure, and a graphic representation of the fusion cycle shall be part of the quality control records.

S-43.2 Creek Crossing

Creek crossing shall consist of excavation within the sheet pile walls, installation of the HDPE siphon pipes within the designated creek crossing, floating and sinking of the HDPE siphon pipes, bedding backfill to the springline of the largest pipe, construction of a concrete cap, installation of the riprap cap, and installation of concrete weight yokes. The HDPE siphon pipe sizes shall be as shown on plans. Permanent and temporary sheet pile containment walls shall be provided as necessary. Contractor must submit construction and installation plan for approval prior to construction. The City will consider alternate creek crossing construction methods if proposed by

the Contractor at least two (2) weeks before construction is to begin on the crossing. Contractor's creek crossing plan shall meet, but is not limited to the requirements below. Creek crossing sub-contractor if used must be listed on the proposal form.

Creek flows are known to fluctuate significantly by storm events and appropriate accommodations should be accounted for when performing work in this area.

B. Silt Curtain and Erosion Control: Prior to initiating excavation in the creek area, Contractor shall install a silt curtain downstream of the excavation as noted on plans to minimize the silt impact. Contractor shall grade the top of excavation cuts to route runoff away from the trenched areas. Immediately after installation of HDPE siphon pipes, silt curtain shall be installed along the creek banks as shown and silt fence shall be installed generally as indicated on the plans or as necessary to contain silts from runoff.

C. Installation of Permanent Sheet Pile: Contractor shall install the permanent sheet pile wall as shown on the creek crossing detail section. The depth and gauge of the sheet pile need to be Engineered to determine the acceptable configuration to enable a cantilevered construction under the anticipated loads as specified at the end of this section.

D. Sheeting Design: Continuous sheeting, which is to be constructed across the creek shall be designed in accordance with the following provisions.

The Contractor shall be responsible for designing and constructing safe and adequate continuous sheeting which provides the necessary rigidity, supports the loads imposed and produces, in the finished structure, the lines and grades indicated on the plans.

Acceptance by the City, and/or the Engineer, of the designs and working drawings will not relieve the submitting agency and/or Contractor of the ultimate responsibility and liability for the continuous sheeting.

The Contractor shall submit to the Engineer working drawings and design calculations for the continuous sheeting proposed for use in the sanitary sewer crossing of the creek. The drawings and calculations shall be signed by a Licensed Engineer in the State of Minnesota. Three sets of drawings and one copy of the design calculations shall be furnished to the Engineer for review and approval. A minimum of 15 days should be allowed for the Engineers review after all drawings and supporting material are received. No sheet pile construction shall be allowed until the plans and calculations are reviewed and approved.

At a minimum, sheeting shall be placed to a depth of ten (10) feet below the riprap at the bottom of the channel, or to refusal if it occurs before that depth.

The design load for the continuous sheeting shall consist of the sum of the dead and live vertical loads and the assumed horizontal load. The assumed horizontal load to be resisted by the continuous sheeting system shall be the sum of the actual horizontal loads due to the soils, water, equipment, and construction sequence, plus an allowance for creek flow if deemed necessary. The design calculations shall include a determination of the depth of the continuous sheeting.

The Contractor shall provide Temporary sheeting as necessary to complete the work or phase of the construction, and as specified. Temporary sheeting shall be incidental to the creek crossing.

E. Trench Excavation: Contractor shall excavate within the permanent sheet pile wall in the wet. The trench bottom will be sounded throughout the length of the trench to confirm proper subcut grade.

F. Rock: Rock if encountered shall be removed according to provisions listed elsewhere in the specifications.

G. Assembling the Pipe: HDPE pipes will be assembled by heat welding. Pipe shall be fused entirely above ground prior to installation. Fused pipes shall be of sufficient length to allow for thermal expansion and contraction. Contractor shall provide concrete yokes to be assembled around the 2 pipes for weight and support. A minimum of 4 yokes shall be provided evenly spaced at a maximum spacing of 15 feet.

H. Floating the Pipe: The assembled section shall then be pulled into the trench, working until the entire length of assembled siphon is floated into position above the trench. A guideline across the creek or guide posts attached to the submerged sheet pile shall be provided to ensure the floated pipe is properly aligned over the sheet pile trench.

I. Sinking the Pipe: Upon setting the pipe in the proper position over the trench the pipe shall be filled with water and slowly sunk to final grade.

J. Bedding the Pipe: The pipe assembly shall then be bedded with a CA-3 clean rock bedding to the springline of the largest pipe. The bedding shall be installed from each shoreline using a crane and clam (or backhoe as appropriate) to minimize the creek disturbance. The concrete yokes shall hold the pipe above the trench floor. The clean rock shall be worked under the pipes using concrete vibrators to ensure compaction and distribution of the bedding material.

K. Concrete Encasement: The sheet pile trench shall then be filled with concrete up to within 4' of the creek bed as shown on the crossing section detail. The concrete shall be placed using tremi techniques.

L. Riprap Placement: The remaining trench shall be backfilled with riprap as shown on the section detail.

M. Crossing Permit: The requirement of a Department of Natural Resources (DNR) permit shall become a part of the construction requirements. The permit will be secured by the City. No work may be performed in the creek until **May 14th, 2012**, pending DNR approval for the crossing.

N. Bypassing: It is anticipated that bypass pumping will not be required for installation of the siphon. If the Contractor sequences the project so bypassing pumping is required the following provisions shall be followed. Bypass pumping and piping, temporary wiring, and all other items are the responsibility of the Contractor. Contractor shall be responsible for setting up and

maintaining bypass pumping operations. Contractor shall coordinate bypassing plan with Owner. Existing flows in gravity sewer at 11th Ave. and 2nd St. are approximately 0.5 to 1 million gallons per day (MGD) for average day and 1.5 to 2.5 MGD for wet weather.

S-43.3 Siphon MH Structures and Appurtenances

Siphon MH Structures

The Contractor shall furnish and install precast reinforced concrete vertical box culvert and manhole sections for sizes shown on plans which meet ASTM Specifications. All necessary block outs for entrance/exit pipes, etc. shall be formed at the proper location when the section is cast. Pipe openings in the structure shall include a flexible watertight boot seal connection to join the pipes to the structure as shown on plans. Boot seal shall allow for differential settlement of the pipe and manhole wall to occur, but shall restrain movement along the length of the pipe. All structure joints shall be sealed with a joint sealer and sealing wrap as shown on plans to ensure water tightness.

Access Door

The Contractor shall furnish and install floodtight aluminum access doors where shown on plans. The access door shall have a ¼" (7 mm) thick, mill finish, aluminum frame designed for surface mounting. Access frame shall provide minimum 48" x 48" clear opening.

Door panel shall be ¼" aluminum diamond plate, reinforced to withstand a 10 foot column of stationary water, or approximately 625 psf load rating. The door shall incorporate a 90 degree return flange around the perimeter. Stainless steel pressure locks shall be provided to work in conjunction with a ¼" thick neoprene compression gasket, mounted to the underside of the door, to ensure minimal water intrusion. Door shall open to 90 degrees and automatically lock with a T-316 stainless steel hold open arm with aluminum release handle. Hinges and all fastening hardware shall be T-316 stainless steel. Unit shall lock with pad lock lugs. Unit shall carry a lifetime guarantee against defects in material and/or workmanship. The access doors shall be F1R (single leaf) series access frames and covers as manufactured by Halliday Products, Inc. or equal.

Access door shall include fall safety grating or fall protection. Fall protection nets will not be accepted.

Stop Logs

Stop logs shall be furnished and installed for frames at two locations as shown on the plans. Stop logs shall be interchangeable between the two frames to provide the elevations as noted on the plans. Stop logs shall be stainless steel with UHMWPE guides, EPDM seals and flush bottoms. Stop logs shall be Series 95 as manufactured by Fontaine or pre-approved equal.

Painting

The Contractor shall furnish all labor, materials and equipment required to complete painting as indicated in the following schedule. All items shall be thoroughly cleaned before painting. Paint and the paint products of Tnemec Company, Inc. and Ameron, Inc. are listed as standards of quality. Products of other manufacturers, comparable in quality and type to those specified, will be acceptable.

Painting shall be done at such times as approved by the Engineer. All painting shall be done strictly in accordance with the manufacturer's instructions following time and temperature requirements

written into each data sheet as supplied by the manufacturer. All painting shall be performed in a manner satisfactory to the Engineer.

Color shall be as selected by the Owner or Engineer.

Mat'l. or Surface to be Painted	Coats	Tnemec Coatings	Ameron Coatings	Coating Thickness, mils (Minimum Dry)
Interior Concrete of all siphon MH structures	1st Coat	Series N69 Epoxoline	Amerlock 400	5 mils
	2nd - Coat	Series N69 Epoxoline	Amerlock 400	5 mils
	3rd - Coat	Series N69 Epoxoline	Amerlock 400	5 mils
	Total	15 mils		

S-43.4 **Basis of Payment**

The sanitary sewer siphon materials and installation shall be paid for as a lump sum including but not limited to: tree removals, creek crossing, sheeting, concrete, concrete yokes, siphon piping and fittings, and related earthwork, riprap, aggregate, erosion control, bike path restoration, guard rail and site work.

Curb and gutter and street restoration are not included in the payment for this section, but are included in another section of these specifications.

Storm sewer pipe, apron and riprap are not included in the payment for this section, but are included in another section of these specifications.

Siphon MH-18 inlet structure and Siphon MH-19 outlet structure shall be paid for as a separate lump sum for each including but not limited to: precast concrete structure, base and cover, interior concrete and reinforcing steel, boot seals, access door, casting, stop logs, steps, paint, earthwork, aggregate, and site work.

Item No.	Item	Unit
S100.505	SIPHON SYSTEM	LS

S-44 (W200 & 2504) WATERMAIN

This work shall consist of providing all labor, equipment, and materials to construct the watermain. All work shall be done in accordance with The City of Rochester Standards for Street Construction.

S-44.1 **Maintenance of Service**

Disruption of watermain flows during the construction of this project shall be kept to a minimum and considered incidental to the project.

All watermain disruptions shall be coordinated with City of Rochester Public Utilities.

Services shall not be disrupted for more than 4 hours. All service connection work will be accomplished and coordinated with the residences and businesses served. This may require temporary service connections in these areas.

The City of Rochester Public Utilities and all affected property owners and residents shall be notified a minimum of 48 hours prior to disruption of service, no exceptions.

S-44.2 **Temporary Water System**

The Contractor is required to provide a temporary water system during and incidental to the project. The temporary water system shall be phased in such a way that the residents will not remain on temporary water for the duration of the project.

All temporary piping shall meet the requirements of the Minnesota Department of Health and the National Sanitation Foundation Standard 61.

The Contractor is not allowed to provide temporary water service by connecting houses together with garden hoses. The temporary water system shall pass a bacteriological test in accordance with AWWA C 651, prior to the system being put into service each time it is set up. The temporary water system shall be connected to the houses via hose bibs. The residents should have new shut off valves inside their houses that can be turned off. If house doesn't have new shut off valve, contact RPU to resolve. If the hose bib has a back flow preventer, the Contractor shall remove and replace the hose bib.

S-44.3 **Hydrants** shall be constructed according to section W200 and the detail plate. Hydrant installation will be measured by the number of hydrants installed complete with gate valve and housing as specified. Payment will be made at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto including, but not limited to any additional water leads, drain pits, concrete blocking, extensions, risers or fittings necessary to complete the new installation.

S-44.4 **4-12" Gate Valve and Box** shall be constructed according to section W200 and the detail plate. Measurement will be made by the number of valves and boxes installed as specified. Payment will be made at the Contract bid price per each, which shall be compensation in full for all costs incidental thereto to install the valve and box complete and inplace.

S-44.5 **4-12" Watermain** shall be constructed according to section W200 and the detail plate. Measurement shall be by the linear foot. This work includes, but is not limited to all materials necessary maintain service, excavation, bedding and backfill necessary to install the watermain.

S-44.6 **Lower Watermain** shall be constructed according to section W200 and the detail plate. Measurement shall be by the linear foot. Lower watermain will be measured by the linear foot installed complete with fittings as specified for the diameter. Payment will made under Item 2504.603 (Lower __" Watermain) at the Contract bid price per linear foot, which shall be compensation in full for all costs incidental thereto including, but not limited to, any additional concrete blocking, extensions, risers or fittings necessary to complete the lowering.

S-44.7 **Basis of Payment**

Trenching, Bedding, Encasement and Backfill material for each type of pipe shall be according to the manufacturers' recommendations for pipe installations in a roadway section or T100, whichever is more stringent. All costs of furnishing and placing the pipe installation materials shall be considered incidental to the installation of the pipe.

Item No.	Item	Unit
W200.514	FURNISH & INSTALL __IN POLYSTYRENE INSULATION	S F
W200.528	FURNISH & INSTALL __IN DUCTILE IRON PIPE CLASS 52	L F
W200.550	FURNISH & INSTALL __IN GATE VALVE AND BOX	EACH
W200.560	FURNISH & INSTALL HYDRANT	EACH

W200.562	FURNISH & INSTALL WATER MAIN FITTINGS	LB
W200.564	REMOVE HYDRANT	EACH
W200.564	REMOVE EXISTING WATERMAIN	L F
W200.572	CONNECT TO EXISTING WATERMAIN	EACH

S-45 (C150) SERVICE CONNECTIONS

This work shall consist of providing all labor, equipment, and materials to construct the service connection. All work shall be done in accordance with The City of Rochester Standards for Street Construction.

S-45.1 **Maintenance of Service**

1 Sanitary

Disruption of Sanitary flows during the construction of this project shall be kept to a minimum and considered incidental to the project.

Services shall not be disrupted for more than 4 hours. All service connection work will be accomplished and coordinated with the residences and businesses served. This may require temporary bypasses in these areas. If the Contractor sequences the project so bypassing pumping is required the following provisions shall be followed. The Contractor shall submit a plan detailing the necessary bypasses needed for each stage of construction. Bypass pumping and piping, temporary wiring, and all other items are the responsibility of the Contractor. Contractor shall be responsible for setting up and maintaining bypass pumping operations. Contractor shall coordinate bypassing plan with Owner.

The City of Rochester and all affected property owners and residents shall be notified a minimum of 48 hours prior to disruption of service.

2 Water

Disruption of watermain flows during the construction of this project shall be kept to a minimum and considered incidental to the project.

All watermain disruptions shall be coordinated with City of Rochester Public Utilities.

Services shall not be disrupted for more than 4 hours. All service connection work will be accomplished and coordinated with the residences and businesses served. This may require temporary service connections in these areas.

The City of Rochester Public Utilities and all affected property owners and residents shall be notified a minimum of 48 hours prior to disruption of service, no exceptions.

S-1.1 **Materials**

All materials for sanitary sewer services shall be as indicated on the plans or standards.

Bedding and encasement requirements shall conform to gradation CA3 in areas of high water table, and to Mn/DOT Class 5 in all other areas. When in water table, geotextile fabric shall be furnished and installed over the bedding and encasement as an incidental item.

S-1.2 **Construction Requirements**

All copper tubing shall be cut with a tubing cutter that is in good condition. Cuts shall be square and the inside of the pipe shall be reamed.

Embedment or encasement limits shall conform to that specified for sanitary sewer. See City specification T-100.307. Compacted Trench Backfill shall be required.

The Contractor shall verify all service connections, or reconnections with the Owners of the adjacent property and City to ensure all service connections are replaced or properly abandoned, before beginning service connection work.

The Contractor shall be required to coordinate service line work with any other private plumbing contractors who may need to enter the site to perform work from the boulevard to the house.

S-1.3 **Item C150.503 "__in Sanitary Sewer Service Connection"** shall be replaced from the main to the boulevard, as shown in the typical section. The new services shall include all necessary bends, and eccentric adapters (to match flow lines) to make the complete connection. Measurement and payment shall be made at the contract **unit price per each**, which shall be compensation in full for all labor, equipment, and materials necessary to disconnect/reconnect, maintain service flow, plug, remove and dispose the entire connection.

Where indicated in the plans for service connections extending past the boulevard, or of special alignments of excess lengths beyond the bid each item. Measurement and payment shall be made at the contract **unit price per Lin Ft** in addition to the bid each item. A determination must be made by the City for construction by the linear foot.

S-1.4 **Item C150.504 "__in Water Service Connection"** shall be replaced from the main through the curb box, as shown in the typical section. The new services shall include all necessary corporation stop copper pipe, curb box, and all necessary fittings and adaptors to make the complete connection. Measurement and payment shall be made at the contract **unit price per each**, which shall be compensation in full for all labor, equipment, and materials necessary to disconnect/reconnect, maintain service flow, plug, remove and dispose the entire connection.

Where indicated in the plans for service connections extending past the boulevard, or of special alignments beyond the bid each item. Measurement and payment shall be made at the contract **unit price per Lin Ft** in addition to the bid each item. A determination must be made by the City for construction by the linear foot.

S-1.5 **Measurement and Payment**

Item No.	Item	Unit
C150.503	__IN SANITARY SEWER SERVICE CONNECTION	EACH
C150.503	__IN SANITARY SEWER SERVICE CONNECTION	L F
C150.504	1IN WATER SERVICE CONNECTION	EACH
C150.504	1IN WATER SERVICE CONNECTION	L F

S-2 (2511) RIPRAP AND FABRIC

Riprap shall be in accordance with the provisions of 2511, 3601 and 3733.

S-2.1 Materials:

Random Riprap: shall be Class III-IV, in accordance with Mn/DOT Section 3601.

Topsoil may be blended with riprap as stated in the plans.

Geotextile Fabric: shall be Type IV, in accordance with Mn/DOT Spec. 3733

S-2.2 Measurement and Payment

Item No.	Item	Unit
2511.501	RANDOM RIPRAP CLASS IV	C Y
2511.515	GEOTEXTILE FILTER TYPE IV	S Y

S-3 (2521) CONCRETE WALK

Concrete walk shall be performed in accordance with the provisions of Mn/DOT Section 2521 Rochester Detail Plate 2-13&14, and the following:

S-3.1 **Aggregates** for Concrete Walk and pedestrian ramps

The Contractor shall place a minimum of **4 inches** of compacted aggregate base (in compliance with Mn/DOT 3137, and/or 3138), under all concrete walks constructed as an incidental expense to the walk.

S-3.2 **Item 2521.501 "__" Concrete Walk"** is provided for all sidewalk along the project corridor, excluding pedestrian ramps, driveways, exposed aggregate, and colored sidewalk areas.

S-3.3 Measurement for concrete walk will be made by the top surface area in square feet as specified. The measurement will be taken from the outer most edge of the concrete walk. Payment will be made under Item 2521.501 (__" CONCRETE WALK) at the Contract bid price per square foot, which shall be payment in full for all costs involved.

Item No.	Item	Unit
2521.501	__" CONCRETE WALK	S F

S-4 (2531) CONCRETE CURBING

The provisions of Mn/DOT 2531 are supplemented and/or modified with the following:

A contraction joint shall be provided at each transverse joint and intermediate joints shall be placed to provide intervals not greater than 10-ft (2.7m) nor less than 5-ft (1.5m).

Transverse expansion joints for curb and gutter shall be provided at 300-ft (90m) intervals as well as at structures and changes in alignment.

Metal reinforcement at catch basins shall be placed in accordance with Rochester Detail Plate 2-06. Furnishing and placing metal reinforcement shall be considered as incidental expense and no separate payment will be made therefore

Item No.	Item	Unit
2531.501	CONCRETE CURB & GUTTER DESIGN B624	L F
2531.501	CONCRETE CURB & GUTTER DESIGN B624 (MOD)	L F

S-5 (2531) CONCRETE DRIVEWAY PAVEMENT

Concrete walk shall be performed in accordance with the provisions of Mn/DOT Section 2531 except as modified below:

S-5.1 The Contractor shall place a minimum of **4 inches** crushed rock base under all driveways and associated sidewalk section through the driveway. Furnishing and placing the crushed rock base will be considered incidental to the pavement construction and no separate payment will be made therefore.

S-5.2 Saw cutting shall be considered incidental to concrete pavement.

Item No.	Item	Unit
2531.507	__" CONCRETE DRIVEWAY PAVEMENT	S Y

S-6 (2531) PEDESTRIAN CURB RAMP – TRUNCATED DOME SYSTEMS

This work consists of furnishing and installing Truncated Dome Systems (detectable warning surfaces) at pedestrian curb ramps in compliance with the Public Rights-of-Way Accessibility Guidelines (PROWAG). This work shall be performed in accordance with the applicable MnDOT Standard Specifications, these Special Provisions, the details in the Plan, and the following:

S-6.1 **Construction Requirements**

The Contractor shall select a truncated dome product from the approved products list at http://www.dot.state.mn.us/products/miscmaterials/truncateddomes.html. The truncated domes shall be placed in concrete and shall be pressed firmly into the concrete to the point that concrete

fills the vent holes on the truncated dome plates. No cutting of truncated domes will be allowed unless approved by the Engineer. Any swelling of the concrete that occurs around the truncated domes must be screeded off and the surrounding concrete shall be finished flush with the truncated dome plate edge. To ensure that the truncated domes are well seated in concrete, the Contractor should provide a 3 inch minimum border around the edges of the truncated domes.

S-6.2 The Contractor will be allowed to interchange 9 foot 5 inch and 10 foot radial truncated domes when either is called for in the Plan. If the Contractor does make a substitution, the Contractor will be required to modify the curb line radius to match the truncated domes and meet the detectable edge requirements listed in Section S-2531 (CONCRETE CURB AND GUTTER (ADA)) of these Special Provisions

S-6.3 **Method of Measurement**

The truncated dome area will be measured by the square foot.

S-6.4 **Basis of Payment**

Payment will be made under Item 2531.618 (Truncated Domes) at the Contract bid price per square foot, which shall be compensation in full for furnishing and installation of truncated domes.

Item No.	Item	Unit
2531.618	TRUNCATED DOMES	S F

S-7 (2554) INSTALL GUARDRAIL

This work shall consist of installing guardrail salvaged elsewhere under this Contract in accordance with the following:

S-7.1 **Method of Measurement**

Measurement will be made by the length in **linear feet** of rail installed complete in place as specified.

S-7.2 **Basis of Payment**

Payment will be made under Item 2554.603 (INSTALL GUARDRAIL) at the Contract bid price per **linear foot**, which shall be compensation in full for all costs incidental thereto, including but not limited to: 1) installing rail components removed and salvaged elsewhere under this Contract in the new locations as specified, and 2) furnishing and installing any other new rail components as may be required for the complete installation, in addition to those materials available from the salvage operations.

Item No.	Item	Unit
2554.603	INSTALL GUARDRAIL	L F

S-8 (2564) INSTALL SIGN

This work shall consist of installing signs, salvaged elsewhere under this Contract in accordance with the following:

S-8.1 **Method of Measurement**

Measurement will be made by the number of sign posts installed (regardless of the number of signs on the post) complete in place as specified.

S-8.2 **Basis of Payment**

Payment will be made under Item 2564.602 (INSTALL SIGN) at the Contract bid price per each, which shall be payment in full for all costs involved.

Item No.	Item	Unit

2564.602 INSTALL SIGN.....EACH

S-9 (2573) EROSION CONTROL SUPERVISOR

The provisions of MnDOT 2573 are supplemented and/or modified with the following:

S-9.1 The second paragraph of MnDOT 2573.3A1 Erosion Control Supervisor, is revised to read as follows:

The Erosion Control Supervisor shall be a responsible employee of the prime Contractor and/or duly authorized by the prime Contractor to represent the prime Contractor on all matters pertaining to the NPDES construction stormwater permit compliance. The Erosion Control Supervisor shall have authority over all Contractor operations which influence NPDES permit compliance including grading, excavation, bridge construction, culvert installation, utility work, clearing/grubbing, and any other operation that increases the erosion potential on the Project. In addition, the Erosion Control Supervisor shall **implement the Contractor's quality control program and other provisions in accordance with 1717.2 and** be available to be on the Project within 24 hours at all times from initial disturbance to final stabilization as well as perform the following duties:

S-9.2 MnDOT 2573.3 A2, Construction of Temporary Storm Water Basins, is revised to read as follows:

Temporary storm water basins shall be constructed concurrently with the start of soil disturbing activities whenever practicable. The basins must be made fully functional and have storm water runoff from the localized watershed directed to the basins. The exposed sideslopes of the basins must be mulched and/or seeded within the time periods as set forth in 1717, or as directed by the Engineer.

S-9.3 The second paragraph of MnDOT 2573.3 A5, Vehicle Tracking on to Paved Surfaces, is revised to read as follows:

The Contractor is responsible for insuring paved streets are clean at the end of each working day or more often as necessary to provide safety to the traveling public. Tracked sediment on paved surfaces must be removed by the Contractor within 24 hours of discovery, in accordance with 1717.2. Payment for street sweeping to provide safe conditions for the traveling public, environmental reasons or regulatory requirements shall be as provided in accordance with 1514.

S-9.4 The first sentence of MnDOT 2573.3E2 is revised to read as follows:

The bioroll shall be installed and anchored with wood stakes. The stakes shall be at a minimum nominally 25 mm x 50 mm **(1 inch x 2 inch)** and a minimum of 400 mm **(16 inches)** long with a pointed end.

S-9.5 The first paragraph of MnDOT 2573.3J Filter Log Installation, is revised to read as follows:

J Filter Log Installation

Filter logs shall be placed in accordance with the Plan. Straw and wood fiber filter logs shall be staked in place with wood stakes. Wood stakes shall be at a minimum 25 x 51 mm **(1 x 2 inch)** nominal size by 400 mm **(16 inches)** long. The stakes shall be driven through the back half of the log at an angle of approximately 45 degrees with the top of the stake pointing upstream. When more than one log is needed for length, the ends shall be overlapped 150 mm **(6 inches)** with both ends staked. Staking shall be every 0.3 m **(1 foot)** along the log unless precluded by paved surface or rock.

S-9.6 Section 2573.4S is deleted and replaced by the following:

No measurement will be made of the various duties that the Erosion Control Supervisor performs or of the number of hours required, but all such work will be construed to be included in the single Lump Sum Payment. Upon satisfactory completion of at least half of the anticipated Project duration time, the Engineer may authorize partial payment not exceeding 50 percent of the Contract bid price. Project duration time is estimated as the time

between the actual Project start date and the Project completion date. The remaining percentage will be paid upon completion of the Project.

Item No.	Item	Unit
2573.550	EROSION CONTROL SUPERVISOR	LS

S-10 (2573) TEMPORARY EROSION CONTROL AND TURF ESTABLISHMENT

Temporary Erosion Control and Turf Establishment shall be performed in accordance with the provisions of Mn/DOT Section 2573 except as modified below:

S-10.1 **Temporary Rock Construction Entrance** This work consists of furnishing, installing, maintaining, and removing temporary rock construction entrances as required by permit or as directed by the Engineer, with the purpose of reducing the amount of solids tracked by construction vehicles from the site to surfaces outside the site where runoff can carry the solids to stormwater discharge.

S-10.2 **Inlet Protection**: shall be furnished and installed on all inlets discharging to surface water. Inlets in rough graded areas need protection to keep any sediment from being transported to a Water of the State, or filling up the pipes with sediment. Inlet protection is shown in the plans by type; see specification 3891. Devices approved by the MN/Department's Erosion Control Engineering Unit and on file on the web under the Materials Engineering Section's Approved Products List can be furnished as meeting this specification requirement.

Bidders are advised that payment for furnishing and installing temporary erosion control set forth in the foregoing area is for the initial installation and removal only. Any replacement components as may be necessary to maintain the temporary erosion control devices in a functional condition, to the satisfaction of the Engineer, during the tenure of this Contract shall be furnished, installed, maintained, and removed at the Contractor's expense.

Item No.	Item	Unit
2573.502	SILT FENCE, TYPE HEAVY DUTY	L F
2573.530	STORM DRAIN INLET PROTECTION	EACH
2573.540	FILTER LOG TYPE WOOD FIBER BIOROLL	L F
2573.602	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EACH

S-11 (2575) PERMANENT EROSION CONTROL AND TURF ESTABLISHMENT

The provisions of Mn/DOT 2575 are supplemented and/or modified with the following:

S-11.1 **Disturbed areas**, as shown in the plans, shall be sodded or seeded and mulched as soon as practical after completion of the grading operations, but within the period specified for germination of seed.

S-11.2 **Topsoil:** Topsoil should be at a minimum of 6 inches on seeded areas and 3 inches thick on sodded areas. This material should have been retained on the project included in the common excavation item.

S-11.3 **Sod:**

Sodding around storm aprons, shall be according to Mn/Dot Detail Plate 9102D and shown on the Plans; According to the requirements of Mn/DOT 3878.2, B **"Erosion Control Sod"**.

Sodding around other areas shall be as shown on Plans; According to the requirements of Mn/DOT 3878.2, D **"Mineral Sod"**.

S-11.4 **Watering:**

The Contractor shall make, at no cost to the Owner, whatever arrangements may be necessary to ensure an adequate supply of water to meet the needs of this Contract. The Contractor shall also furnish all necessary hose, equipment, attachments, and accessories for the adequate irrigation of

lawns and planted areas as may be required to complete the work as specified and water used for this purpose shall be incidental to the cost of the turf establishment.

S-11.5 **Basis of Payment**

Item No.	Item	Unit
2575.505	SODDING TYPE MINERAL	S Y

S-12 (3137) COARSE AGGREGATE FOR PORTLAND CEMENT CONCRETE

Mn/DOT 3137 shall be deleted and replaced with the following:

3137.1 SCOPE

Provide coarse aggregate for use in portland cement concrete.

3137.2 REQUIREMENTS

A General

Provide coarse aggregate consisting of clean, sound, durable particles, uniform in quality, and free from wood, bark, roots, and other deleterious material.

The Engineer, in conjunction with the Concrete Engineer, may consider the following as the basis for acceptance of coarse aggregate for portland cement concrete:

(1) Results of laboratory tests,

(2) Behavior under natural exposure conditions,

(3) Behavior of other portland cement concrete with aggregate from the same or similar geological formations or deposits, and

(4) Any other tests or criteria as deemed appropriate by the Engineer, in conjunction with the Concrete Engineer.

B Classification

Provide coarse aggregate meeting the requirements of one of the following classifications:

(1) Class A: Crushed quarry rock including quartzite, gneiss, and granite, or mine trap rock including basalt, diabase, gabbro, and other igneous rock types. Class A aggregate may contain no greater than 4.0 percent non-Class A aggregate. The Department will not allow the intentional blending or adding of non-Class A aggregate.

(2) Class B: All other crushed quarry or mine rock types including carbonates, rhyolite, and schist.

(3) Class C: Natural or partly crushed gravel obtained from a natural gravel deposit.

(4) Class D: Mixture of at least two classes of coarse aggregate. The Engineer, in conjunction with the Concrete Engineer, will determine the suitability of the Class D aggregate for the proposed use including proportioning.

(5) Class R: Aggregate obtained from recycling concrete. The Engineer, in conjunction with the Concrete Engineer, will determine the suitability of the Class R aggregate for the proposed use including proportioning.

C Washing

Wash Class B, Class C, Class D, and Class R coarse aggregate. Wash Class A aggregate as needed to comply with the requirements of Table 3137-1.

D Quality

Quality requirements are based on each individual aggregate fraction unless otherwise allowed by the Engineer, in conjunction with the Concrete Engineer with the exception of the following:

(1) When 100 percent of the fractions from a single source pass the 1 in [**25 mm**] sieve, quality requirements are based on the composite value of the combined aggregates.

(2) When less than 100 percent of the fractions from a single source pass the 1 inch [**25 mm**] sieve:

(a) Those fractions passing the 1 inch [**25 mm**] sieve are combined and based on the composite value;

(b) The fractions greater than or equal to 1 inch [**25 mm**] are based on each individual aggregate fraction.

D1 Coarse Aggregate for General Use

Provide coarse aggregate for general use concrete in accordance with Table 3137-1.

Table 3137-1 Coarse Aggregate for General Use		
Quality Test		**Maximum Percent by Weight**
(a)	Shale:	
	Fraction retained on the ½ in [**12.5 mm**] sieve	0.4
	Fraction retained on the No. 4 [**4.75 mm**] sieve, as a percentage of the total material	0.7
(b)	Soft iron oxide particles (paint rock and ochre)	0.3
(c)	Total spall materials*:	
	Fraction retained on the ½ in [**12.5 mm**] sieve	1.0
	Fraction retained on the No. 4 [**4.75 mm**] sieve, as a percentage of the total material	1.5
(d)	Soft particles‖	2.5
(e)	Clay balls and lumps	0.3
(f)	Sum of (c) total spall materials, (d) soft particles, and (e) clay balls and lumps†	3.5
(g)	Slate	3.0
(h)	Flat or elongated pieces‡	15.0
(i)	Quantity of material passing No. 200 [**75 µm**] sieve:	
	Class A and Class B aggregates#	1.5
	Class C and Class D aggregates§	1.0
(j)	Los Angeles Rattler, loss on total sample	40.0
(k)	Soundness of magnesium sulfate**	15.0

* Includes the percentages retained by shale and soft iron oxide particles, plus other iron oxide particles, unsound cherts, pyrite, and other materials with similar characteristics.

‖ Exclusive of shale, soft iron oxide particles, and total spall materials.

† Sum of the total spall materials, soft particles, and clay balls and lumps. For total spall materials, use the percent in the total sample retained on the No. 4 [**4.75 mm**] sieve.

‡ Thickness less than 25 percent of the maximum width. Length greater than 3 times the maximum width.

\# Each individual fraction at the point of placement consists of dust from the fracture and free of clay or shale.

§ For each individual fraction at the point of placement.

** Loss at 5 cycles for any fraction of the coarse aggregate. Do not blend materials from multiple sources to obtain a fraction meeting the sulfate soundness requirement.

D2 Coarse Aggregate for Bridge Superstructure

Provide coarse aggregate in accordance with 3137.2D1 except as modified by Table 3137-2 for use in the following:

(1) Bridge superstructure (deck, railing, posts, curbs, sidewalks, and median strips);

(2) Approach panels; and

(3) Precast concrete panel facings for Mechanically Stabilized Earth walls.

Table 3137-2
Coarse Aggregate for Bridge Superstructure

	Quality Test	Maximum Percent by Weight
(a)	Shale:	
	Fraction retained on the ½ in [**12.5 mm**] sieve	0.2
	Fraction retained on the No. 4 [**4.75 mm**] sieve as a percentage of the total material	0.3
(b)	Soft iron oxide particles (paint rock and ochre)	0.2
(c)	Total spall materials*:	
	Fraction retained on the No. 4 [**4.75 mm**] sieve as a percentage of the total material	0.5
(d)	Soft particles‖	2.5
(e)	Clay balls and lumps	0.3
(f)	Sum of (c) total spall materials, (d) soft particles, and (e) clay balls and lumps, use the percent in the total sample retained on the No. 4 [**4.75 mm**] sieve	3.0
(g)	Absorption for Class B aggregate	1.75
(h)	Carbonate in Class C and Class D aggregates by weight	30.0

* Includes the percentages retained by shale and soft iron oxide particles, plus other iron oxide particles, unsound cherts, pyrite, and other materials with similar characteristics.

‖ Exclusive of shale, soft iron oxide particles, and total spall materials.

† Sum of the total spall materials, soft particles, and clay balls and lumps. For total spall materials, use the percent in the total sample retained on the No. 4 [**4.75 mm**] sieve.

D3 Coarse Aggregate for Concrete Pavement

Provide coarse aggregate in accordance with 3137.2D1, except as modified by Table 3137-3, for use in the following:

(1) Concrete pavement, and

(2) Concrete pavement rehabilitation.

Table 3137-3 Coarse Aggregate for Concrete Pavement		
Quality Test		**Maximum Percent by Weight**
(a)	Absorption for Class B aggregate	1.75
(b)	Carbonate in Class C aggregate by weight	30.0

E Gradation

Provide coarse aggregate in accordance with Table 3137-4 including all sizes within the specified limits. The Department defines coarse aggregate as the uniform product of the producing plant, unless some sizes are removed to meet the gradation requirements. Do not use broken or noncontinuous gradations.

If the coarse aggregate has less than 100 percent passing the 1 in [**25 mm**] sieve, proportion the coarse aggregate using at least two fractions. Gradation requirements are based on the composite value of the combined coarse aggregates.

Table 3137-4
Coarse Aggregate Designation for Concrete,
percent by weight passing square opening sieves

Aggregate	2 in [50 mm]	1½ in [37.5 mm]	1¼ in [31.5 mm]	1 in [25.0 mm]	¾ in [19.0 mm]	⅝ in [16.0 mm]	½ in [12.5 mm]	⅜ in [9.5 mm]	No.4 [4.75 mm
CA-00	—	—	—	100	95 – 100	—	—	—	0 – 10
CA-15	100	95 – 100	—	—	35 – 65	—	—	5 – 25	0 – 7
CA-25	100	95 – 100	—	—	50 – 80	—	—	20 – 40	0 – 7
CA-35	—	100	95 – 100	—	55 –85	—	—	20 – 45	0 – 7
CA-45	—	—	100	95 – 100	65 – 95	—	—	25 – 55	0 – 7
CA-50	—	—	—	100	85 – 100	—	—	30 – 60	0 – 12
CA-60	—	—	—	—	100	85 – 100	—	40 – 70	0 – 12
CA-70	—	—	—	—	—	100	85 – 100	50 – 100	0 – 25
CA-80*	—	—	—	—	—	—	—	100	55 – 95

* Do not allow greater than 5 percent to pass the No. 50 [300 µm] sieve.

If producing Class R aggregate, remove reinforcing steel from the concrete and any concrete material passing the No 4 [**4.75 mm**] sieve.

3137.3 SAMPLING AND TESTING

Sample and test coarse aggregate fractions separately in accordance with Table 3137-5.

Table 3137-5 Preliminary Coarse Aggregate Testing	
Aggregate	**Notification and Testing Requirement**
New source	Notify the Engineer at least 1 month before use. Perform new source concrete

	aggregate testing in accordance with the procedure on the Department's website.
Previously tested aggregate	Notify the Engineer at least 2 weeks before use. Perform additional testing as directed by the Engineer, in conjunction with the Concrete Engineer.

Sample and test coarse aggregate in accordance with Table 3137-6.

Table 3137-6
Coarse Aggregate Test Methods

Test	Testing Method
Sampling	Mn/DOT Concrete Manual
Sieve analysis	Mn/DOT Concrete Manual
Shale test	Mn/DOT Laboratory Manual 1207
Quantity of material passing the No. 200 [**75 µm**] sieve	Mn/DOT Concrete Manual
Specific gravity and absorption	Mn/DOT Laboratory Manual 1204
Density	AASHTO T 19 or Mn/DOT Laboratory Manual 1211
Los Angeles Rattler loss	AASHTO T 96
Void content	AASHTO T 19* or Mn/DOT Laboratory Manual 1211
Deleterious materials	Mn/DOT Laboratory Manual 1209
Soundness; magnesium sulfate	Mn/DOT Laboratory Manual 1219
Soft particles	Mn/DOT Laboratory Manual 1218
Flat or elongated pieces	ASTM D 4791
Clay balls or lumps	Mn/DOT Concrete Manual

* Base the void content on an oven-dry and compacted-by-rodding condition of the aggregate and a value of 62.4 lb per cu. ft [**1,000 kg per cu. m**] for water.

S-13 (3138) AGGREGATES FOR SURFACE AND BASE COURSES

The provisions of Mn/DOT 3138 are hereby modified as follows:

S-13.1 If crushed carbonate quarry rock (limestone or dolostone) is used, the minus 75 µm [**#200**] sized portion of the rock insoluble residue shall not exceed 10% by weight for Base Course and Shoulder Aggregate only. The insoluble residue test procedure is on file in the Mn/DOT Materials Laboratory.

S-13.2 Blending of sources and/or beds with an insoluble residue up to 15% is allowed to meet the 10% insoluble residue requirement. Individual beds thinner than 150 mm [**6 inches**] up to 5% of the total face height, are exempt from the 15% maximum insoluble residue requirement. However, the

aggregate producer shall practice good quality control at all times and exclude poor quality stone to the extent practical, regardless of the bed thickness and/or pocket size and location.

S-13.3 No carbonate quarry rock from the Platteville Geological Formation is allowed.

S-13.4 The second paragraph of Mn/DOT 3138.2B Gradation Tables 3138-1 and 2, is revised to read as follows:

If Class 7 is substituted for Classes 1, 3, 4, 5, or 6, it shall meet the gradation requirements of the substituted class (Table 3138-1); except that, for Class 5 and 6, up to 5 percent by mass **(weight)** of the total composite mixture may exceed 25.0 mm (**1 inch**) sieve but 100 percent must pass the 37.5 mm (**1.5 inch**) sieve. Surfacing aggregate mixtures containing salvaged materials shall meet the gradation requirements of the materials specified in the Plan. All gradations will be run on the composite mixture before extraction of the bituminous material.

S-13.5 TABLE 3138-1 in Mn/DOT 3138.2B Gradation Tables 3138-1 and 2, is hereby deleted and replaced with the following:

TABLE 3138-1
BASE AND SURFACING AGGREGATE
Total Percent Passing

Sieve Size	Class 1 **(A)**	Class 2	Class 3 **(A)**	Class 4 **(A)**	Class 5 **(A) (B)**	Class 6 **(A) (B)**
75 mm (3 inches)	--	--	--	--	--	--
50 mm (2 inches)	--	--	100	100	--	--
37.5 mm (1½ inches)	--	--	--	--	--	--
25.0 mm (1 inch)	--	--	--	--	100	100
19.0 mm (3/4 inch)	100	100	--	--	90-100	90-100
9.5 mm (3/8 inch)	65-95	65-90	--	--	50-90	50-85
4.75 mm (No. 4)	40-85	35-70	35-100	35-100	35-80	35-70
2.00 mm (No. 10)	25-70	25-45	20-100	20-100	20-65	20-55
425 µm (No. 40)	10-45	12-30	5-50	5-35	10-35	10-30
75 µm (No. 200)	8.0-15.0	5.0-13.0	5.0-10.0	4.0-10.0	3.0-10.0	3.0-7.0

(A) When salvaged materials are substituted for another class of aggregate, it shall meet the gradation requirements of the class being replaced except as amended in 3138.2 B.

(B) The gradation requirements for aggregates containing 60% or more crushed quarry rock may be amended with the concurrence of the Project Engineer and the Grading and Base Engineer.

S-13.6 The fifth paragraph of Mn/DOT 3138.3 Sampling and Testing, is revised to read as follows:

The stockpile shall be sampled at the rate of one field gradation test per 1,000 metric tons **(tons)** of aggregate used on the Project.

S-14 (3139) (D6) GRADED AGGREGATE FOR BITUMINOUS MIXTURES

Mn/DOT 3139 is hereby deleted and replaced with the following:

3139 Graded Aggregate for Bituminous Mixtures

3139.1 Scope

Provide graded aggregate for use in bituminous mixtures.

3139.2 PLANT MIXED ASPHALT Requirements

A Composition

Provide graded aggregate composed of any combination of the following sound durable particles as described in 3139.2B.

Do not use graded aggregate containing objectionable materials including:

(1) Metal,

(2) Glass,

(3) Wood,

(4) Plastic,

(5) Brick, or

(6) Rubber.

Provide coarse aggregate free of coatings of clay and silt.

Do not add soil materials such as clay, loam, or silt to compensate for a lack of fines in the aggregate.

Do not blend overburden soil into the aggregate.

Feed each material or size of material from an individual storage unit at a uniform rate.

Do not place blended materials from different sources, or for different classes, types, or sizes together in one stockpile unless approved by the Engineer as a Class E aggregate.

B Classification

B.1 Class A

Provide crushed igneous bedrock consisting of basalt, gabbro, granite, gneiss, rhyolite, diorite, and andosite. Rock from the Sioux Quartzite Formation may contain no greater than 4.0 percent non-Class A aggregate. Do not blend or add non-Class A aggregate to Class A aggregate.

B.2 Class B

Provide crushed rock from other bedrock sources such as carbonate and metamorphic rocks (Schist).

B.3 Class C

Provide natural or partly crushed natural gravel obtained from a natural gravel deposit.

B.4 Class D

Provide 100 percent crushed natural gravel produced from material retained on a square mesh sieve with an opening at least twice as large as Table 3139-2 allows for the maximum size of the aggregate in the composite asphalt mixture. Ensure the amount of carryover, material finer than the selected sieve, no greater than 10 percent of the Class D aggregate by weight.

B.5 Class E

Provide a mixture consisting of at least two of the following classes of approved aggregate:

(1) Class A,

(2) Class B, and

(3) Class D.

B.6 Steel Slag

Steel slag cannot exceed 25% of the total mixture aggregate and be free from metallic and other mill waste. The Engineer will accept stockpiles if the total expansion is no greater than 0.5 percent as determined by ASTM D 4792

B.7 Taconite Tailings

Obtain taconite tailings from ore mined westerly of a north-south line located east of Biwabik, Minnesota (R15W-R16W) or from ore mined in southwestern Wisconsin.

B.8 Recycled Asphalt Shingles (RAS)

Provide recycled asphalt shingles manufactured from waste scrap asphalt shingles (MWSS) or from tear-off scrap asphalt shingles (TOSS). Consider the percentage of RAS used as part of the maximum allowable Recycled Asphalt Pavement (RAP) percentage. See Table 3139-3.

B.8.A RAS Gradation.....Mn/DOT Laboratory Procedure 1801

Provide RAS in accordance with the following gradation requirements:

Table 3139-1
RAS Gradation

Sieve size	Percent passing
½ in [12.5 mm]	100
No. 4 [4.75 mm]	90

B.8.B Binder Content

Determine the binder content using chemical extraction meeting the requirements of Mn/DOT Lab Procedure 1851 or 1852.

B.8.C Bulk Specific Gravity

The Contractor may use an aggregate bulk specific gravity (Gsb) of 2.650 in lieu of determining the shingle aggregate Gsb in accordance with Mn/DOT Lab Procedure 1205.

B.8.D Waste Materials

Do not allow extraneous materials including metals, glass, rubber, nails, soil, brick, tars, paper, wood, and plastics greater than 0.5 percent by weight of the graded aggregate as determined by material retained on the No. 4 [4.75 mm] sieve as specified in Mn/DOT Laboratory Procedure 1801.

B.8.E Stockpile

Do not blend an RAS stockpile with other salvage material. Do not blend MWSS and TOSS. The Contractor may blend virgin sand material with RAS to minimize agglomeration if the Contractor accounts for the blended sand in the final mixture gradation.

B.8.F Certification

Ensure the processor provides RAS certification on the following Department form "Scrap Asphalt Shingles from Manufacture Waste" or "Tear-Off Scrap Asphalt Shingles" at www.dot.state.mn.us/materials/bituminous.html.

B.9 Crushed Concrete and Salvaged Aggregate

The Contractor may incorporate no greater than 50 percent of crushed concrete and salvaged aggregate in non-wear mixtures. Do not use crushed concrete in wearing courses.

B.10 Ash

Sewage sludge ash and waste incinerator ash are allowed as an aggregate source at a maximum of 5% of the total weight of the mixture. Only use sewage sludge ash meeting the requirements of the Tier II hazard evaluation criteria as approved by the Engineer with concurrence with Mn/DOT's Environmental Assessment Engineer in the mixture. Only use waste incinerator ash sources approved by the Engineer with concurrence with Mn/DOT's Environmental Assessment Engineer.

B.11 Recycled Asphalt Pavement (RAP)

B.11.A Aggregate Angularity

Provide combined RAP and virgin aggregates that meet the composite coarse and fine aggregate angularity for the mixture being produced.

B.11.B Objectionable Material

Do not use RAP containing objectionable materials including metal, glass, wood, plastic, brick, or rubber.

B.11.C Asphalt Binder Content

Determine the asphalt binder content using the Mn/DOT Lab Manual Method 1851 and 1852.

B.11.D Bulk Specific Gravity

Determine the bulk specific gravity in accordance with Mn/DOT Laboratory Procedure 1205 or 1815.

C Quality

C.1 Los Angeles Rattler Test.....Mn/DOT Laboratory Procedure 1210

Ensure a coarse aggregate loss no greater than 40 percent.

C.2 Soundness (Magnesium Sulfate).....Mn/DOT Laboratory Procedure 1219

Maximum loss after 5 cycles on the coarse aggregate fraction (material retained on No. 4 [4.75 mm] sieve for any individual source within the mix) as follows:

(1) Percent passing the ¾ in [19 mm] sieve to percent retained on the ½ in [12.5 mm] sieve, ≤ 14%,

(2) Percent passing the ½ in [12.5 mm] sieve to percent retained on the ⅜ in [9.5 mm]sieve, ≤18%,

(3) Percent passing the ⅜ in [9.5 mm] sieve to percent retained on the No. 4 [4.75 mm] sieve, ≤ 23%,

(4) For the composite if all three size fractions are tested, the composite loss ≤ 18%, and acceptance will be granted if:

(4.1) If the Contractor meets the composite requirement, but fails to meet at least one of the individual components, the Engineer may accept the source if each individual component is no greater than 110 percent of the requirement for that component.

(4.2) If the Contractor meets each individual component requirement, but fails to meet the composite, the Engineer may accept the source if the composite is no greater than 110 percent of the requirement for the composite.

Coarse aggregate that exceeds the requirements in this section for material passing the No. 4 [4.75 mm] sieve cannot be used.

C.3 Spall Materials and Lumps .....Mn/DOT Laboratory Procedure 1219

Stop asphalt production if the percent of spall or lumps measured in the stockpile or cold feed exceeds the values listed in Table 3139-3. Determine lump compliance by dry batching.

C.4 Insoluble Residue Test .....Mn/DOT Laboratory Procedure 1221

If crushed carbonate quarry rock (limestone or dolostone) is used the minus 75 µm [**#200**] sized portion of the rock insoluble residue shall not exceed 10% by weight. The insoluble residue test procedure is on file in the Mn/DOT Materials Laboratory.

Blending of sources and/or beds with an insoluble residue up to 15% is allowed to meet the 10% insoluble residue requirement. Individual beds thinner than 150 mm [**6 inches**] up to 5% of the total face height, are exempt from the 15% maximum insoluble residue requirement. However, the aggregate producer shall

practice good quality control at all times and exclude poor quality stone to the extent practical, regardless of the bed thickness and/or pocket size and location.

No carbonate quarry rock from the Platteville Geological Formation is allowed.

D Gradation

Ensure the aggregate gradation broad bands meet the following requirements in accordance with AASHTO T-11 (passing the No. 200 [75 µm] wash) and AASHTO T-27.

Table 3139-2
Aggregate Gradation Broad Bands (percent passing of total washed gradation)

Sieve size	A	B	C	D
1 in [25.0 mm]	—	—	100	—
¾ in [19.0 mm]	—	100*	85 – 100	—
½ in [12.5 mm]	100*	85 – 100	45 – 90	—
⅜ in [9.5 mm]	85 – 100	35 – 90	—	100
No. 4 [4.75 mm]	25 – 90	30 – 80	30 – 75	65 – 95
No. 8 [2.36 mm]	20 – 70	25 – 65	25 – 60	45 – 80
No. 200 [0.075 mm]	2.0 – 7.0	2.0 – 7.0	2.0 – 7.0	3.0 – 8.0

* The Contractor may reduce the gradation broadband for the maximum aggregate size to 97 percent passing for mixtures containing RAP, if the oversize material originates from the RAP source. Ensure the virgin material meets the requirement of 100 percent passing the maximum aggregate sieve size.

Table 3139-3
Mixture Aggregate Requirements

Aggregate Blend Property	Traffic Level 2	Traffic Level 3	Traffic Level 4	Traffic Level 5
20 year Design ESAL's	<1 million	1 - 3 million	3 - 10 million	10 – 30 million
Min. Coarse Aggregate Angularity (ASTM D5821)				
(one face / two face), %- Wear	30/-	55 / -	85 / 80	95 / 90
(one face / two face), %- Non-Wear	30/-	55 / -	60/ -	80 / 75

Min. Fine Aggregate Angularity (FAA) (AASHTO T304, Method A) %-Wear %-Non-Wear	40 40	42 40	44 40	45 40
Flat and Elongated Particles, max % by weight, (ASTM D 4791)	-	10 (5:1 ratio)	10 (5:1 ratio)	10 (5:1 ratio)
Min. Sand Equivalent (AASHTO T 176)	-	-	45	45
Max. Total Spall in fraction retained on the #4 [4.75mm] sieve – Wear Non-Wear	5.0 5.0	2.5 5.0	1.0 2.5	1.0 2.5
Maximum Spall Content in Total Sample – Wear Non-Wear	5.0 5.0	5.0 5.0	1.0 2.5	1.0 2.5
Maximum Percent Lumps in fraction retained on the #4 [4.75mm] sieve	0.5	0.5	0.5	0.5
Class B Carbonate Restrictions				
Maximum% -#4 [-4.75mm] Final Lift/All other Lifts	100/100	100/100	80/80	50/80
Maximum% +#4 [+4.75mm] Final Lift/All other Lifts	100/100	100/100	50/100	0/100
Max. allowable scrap shingles– MWSS(1) Wear/Non Wear	5/5	5/5	5/5	5/5
Max. allowable scrap shingles – TOSS(1) Final Lift/All other Lifts	5/5	5/5	0/5	0/0

(1) MWSS is manufactured waste scrap shingle and TOSS is tear-off scrap shingle.

3139.3 Permeable Asphalt Stabilized Stress Relief Course (PASSRC) and Permeable Asphalt Stabilized Base (PASB) Requirements

A Restrictions

Do not use recycled materials including glass, concrete, bituminous, shingles, ash, and steel slag.

B Gradation

The Gradation limits are also considered the Job Mix Formula (JMF) limits.

B.1 PASB

Table 3139-4 PASB Aggregate Gradation	
Sieve Size	Percent Passing
1 ½ inch [37.5 mm]	100
1 inch [25.0 mm]	95 - 100
¾ inch [19.0 mm]	85 – 95
3/8 inch [9.5 mm]	30 – 60
No. 4 [4.75 mm]	10 – 30
No. 8 [2.36 mm]	0 – 10
No. 30 [600 µm]	0 – 5
No. 200 [75 µm]	0 - 3

B.2 PASSRC

Table 3139-5 PASSRC Aggregate Gradation	
Sieve Size	Percent Passing
5/8 inch [16.0 mm]	100
1/2 inch [12.5 mm]	85 – 100
3/8 inch [9.5 mm]	50 – 100
No. 4 [4.75 mm]	0 – 25
No. 8 [2.36 mm]	0 – 5

C Quality

Requirements will meet all of 3139.2.C.

D Mixture Quality Requirements

Table 3139-6 Mixture Aggregate Requirements for PASSRC & PASB	
Aggregate Blend Property	
Coarse Aggregate Angularity (ASTM D5821) (one face/two face) % PASSRC [(1)] PASB [(1)]	 95/- -/65
Fine Aggregate Angularity (FAA) (AASHTO T304, Method A) %	NA
Flat and Elongated Particles, max(2) % by weight, (ASTM D 4791)	NA
Clay Content (2) (AASHTO T 176)	NA
Total Spall in fraction retained on the 4.75mm [#4] sieve	3.0
Maximum Spall Content in Total Sample	5.0
Maximum Percent Lumps in fraction retained on the 4.75mm [#4] sieve	0.5

(1) Carbonate Restrictions: If Class B (as defined in 3139.2.B.2), crushed carbonate quarry rock (limestone or dolostone), is used in the mixture, or if carbonate particles in the material retained on the 4.75 mm [**No. 4**] sieve exceeds 55 percent, by weight, the minus 0.075 mm [**# 200**] sieve size portion of the insoluble residue shall not exceed 10 percent.

3139.4 Ultra Thin Bonded Wearing Course (UTBWC) Requirements.

A. Restrictions

Do not use recycled materials including glass, concrete, bituminous, shingles, ash, and steel slag.

B. Coarse Aggregate

Provide a Class A aggregate, as defined in 3139.2.B.1, in accordance with the following requirements:

Table 3139-7
UTBWC Coarse Aggregate Requirements

Tests	Mn/DOT Laboratory Manual Method	Limit, %
Flat and elongated ratio at 3:1	1208	≤ 25
Los Angeles Rattler Test (LAR)	1210	≤ 40
Bulk Specific Gravity	1204	

C. Fine Aggregate

Provide fine aggregate, passing the No. 4 [4.75 mm] sieve in accordance with the following requirements:

Table 3139-8
Fine Aggregate Requirements

Tests	Method	Limit, %
Sand equivalent*	AASHTO T 176	≥ 45
Uncompacted void content	Mn/DOT Laboratory Manual 1206	≥ 40
Bulk Specific Gravity	Mn/DOT Laboratory Manual 1205	

3139.5 SAMPLING AND TESTING

Perform sampling, sieve analysis, lumps, crushing, and shale testing meeting the requirements of the Mn/DOT Laboratory Manual.

S-15 (3891) STORM DRAIN INLET PROTECTION

The provisions of Mn/DOT 3891 are supplemented and/or modified with the following:

S-15.1 Mn/DOT 3891.3A Rock Log, is revised to read as follows:
Rock logs shall meet the requirements of 3897.2 Filter Log Type Rock Log.

S-15.2 Mn/DOT 3891.3B Compost Log, is revised to read as follows:
Compost logs shall meet the requirements of 3897.2 Filter Log Type Compost Log

S-16 (3889) TEMPORARY DITCH CHECKS

The provisions of Mn/DOT 3889 are supplemented and/or modified with the following:

S-16.1 Mn/DOT 3889.2B Type 2: Bioroll, is revised to read as follows:

Type 2 ditch checks shall consist of 3897 Filter Log Type; Straw Bioroll or Wood Fiber Bioroll.

S-16.2 Mn/DOT 3889.2C Type 3: Bioroll Blanket System, is revised to read as follows:

Type 3 ditch checks shall consist of two components; Filter Log Type; Straw Bioroll or Wood Fiber Bioroll in accordance with 3897, staked on top of a Category 3, specification 3885 erosion control blanket. The blanket shall form a minimum width of 3.7 m (12 feet) perpendicular to the ditch gradient.

S-17 (3891) STORM DRAIN INLET PROTECTION

The provisions of Mn/DOT 3891 are supplemented and/or modified with the following:

S-17.1 Mn/DOT 3891.3A Rock Log, is revised to read as follows:

Rock logs shall meet the requirements of 3897.2 Filter Log Type Rock Log.

S-17.2 Mn/DOT 3891.3B Compost Log, is revised to read as follows:

Compost logs shall meet the requirements of 3897.2 Filter Log Type Compost Log

S-18 FINAL ESTIMATE AND FINAL PAYMENT

The following provisions shall apply to preparation of the Final Estimate and execution of Final Payment under this Contract:

S-18.1 Final Estimate

State Law provides that the final estimate will be made within 90 days after completion of all work required under this Contract. If, however, the total value of the Contract exceeds $2,000,000.00, the 90 day requirement will not apply and the time allowed for making such final estimate shall be 180 days after the work under this Contract has been, in all things, completed to the satisfaction of the Commissioner.

S-18.2 Final Payment

If this Contract contains a "Disadvantage Business Enterprise or Targeted Group Business" goal, the following requirement shall apply:

"Before final payment is made, the Contractor shall also complete an affidavit showing the total dollar amounts of work performed by disadvantaged business enterprise (DBE) and targeted group business (TGB)."

STORM WATER POLLUTION PREVENTION PLAN (SWPP)

FOR

CITY PROJECT NO. **6202-4-10** J NO. **(J7788)**

STATE PROJECT NO. _____

MINNESOTA PROJECT NO. _____

LOCATION: **2nd St NW, ROCHESTER, MN**

TYPE OF WORK **Trunkline Sanitary Sewer and Road Reconstruction**

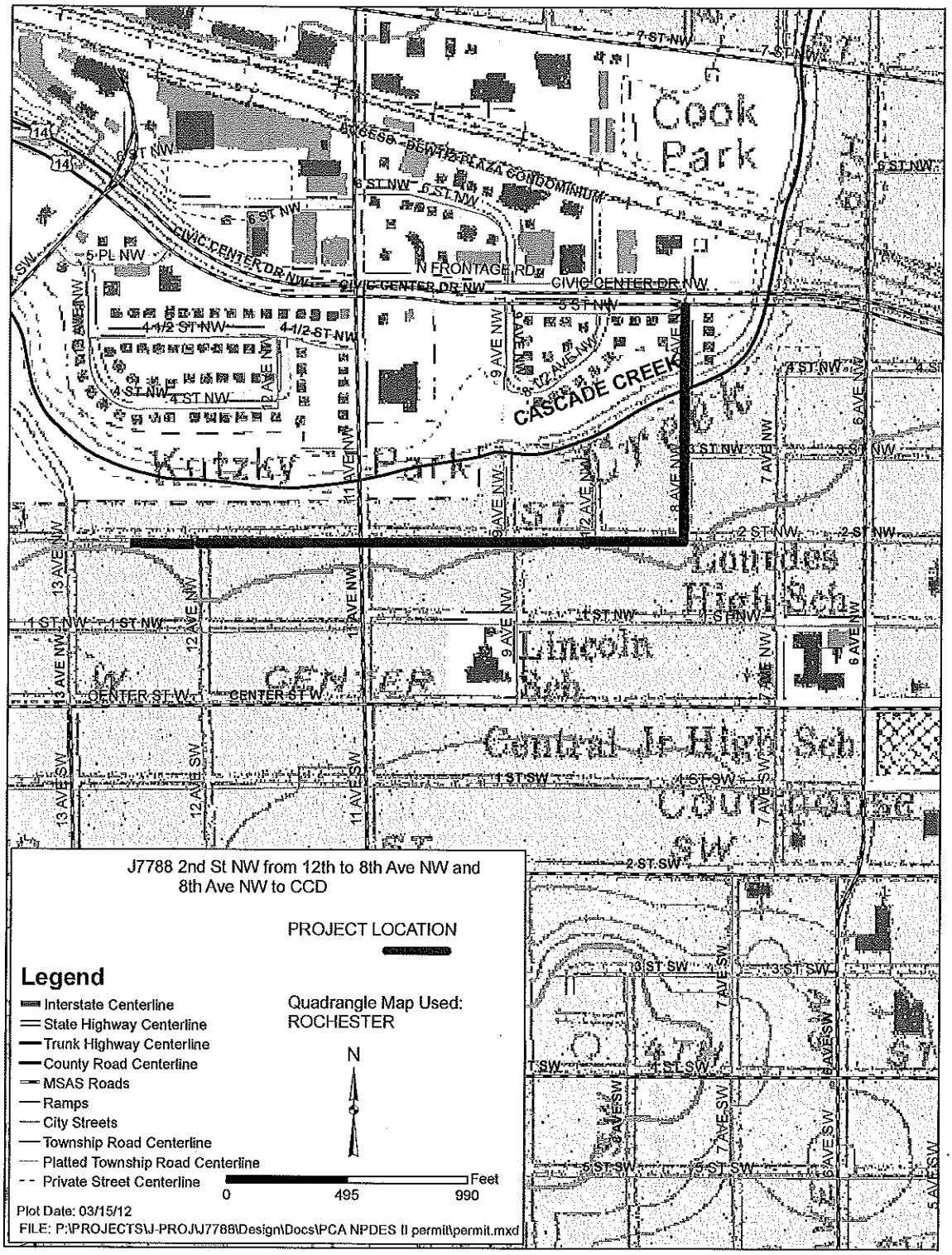
LENGTH **0.65** MILES

To comply with the General Stormwater Permit for Construction Activity (MN R100001)

STORM WATER POLLUTION PREVENTION PLAN CONTACTS

CONTACT INFORMATION		
Owner of the Site		
Business of Firm Name **City of Rochester**		
Last Name First Name Title **Loehr, Jim**	E-mail **jloehr@rochestermn.gov**	Telephone (*include area code*) **507-328-2419**
Mailing Address **201 4th Street SE, Rm 108**	City **Rochester**	State Zip Code **MN, 55904**
Alternate Contact Last Name First Name **Kelm, Russ**	E-mail **rkelm@rochestermn.gov**	Telephone (*include area code*) **507-328-2417**
Contractor (Person who will oversee implementation of the SWPPP)		
Business of Firm Name		
Last Name First Name Title	E-mail	Telephone (*include area code*)
Mailing Address	City	State Zip Code
Alternate Contact Last Name First Name	E-mail	Telephone (*include area code*)

FIGURE 1 – PROJECT LOCATION QUADRANGLE MAP



Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

FIGURE 2 –OLMSTED COUNTY GEOLOGIC ATLAS SOIL TYPES MAP

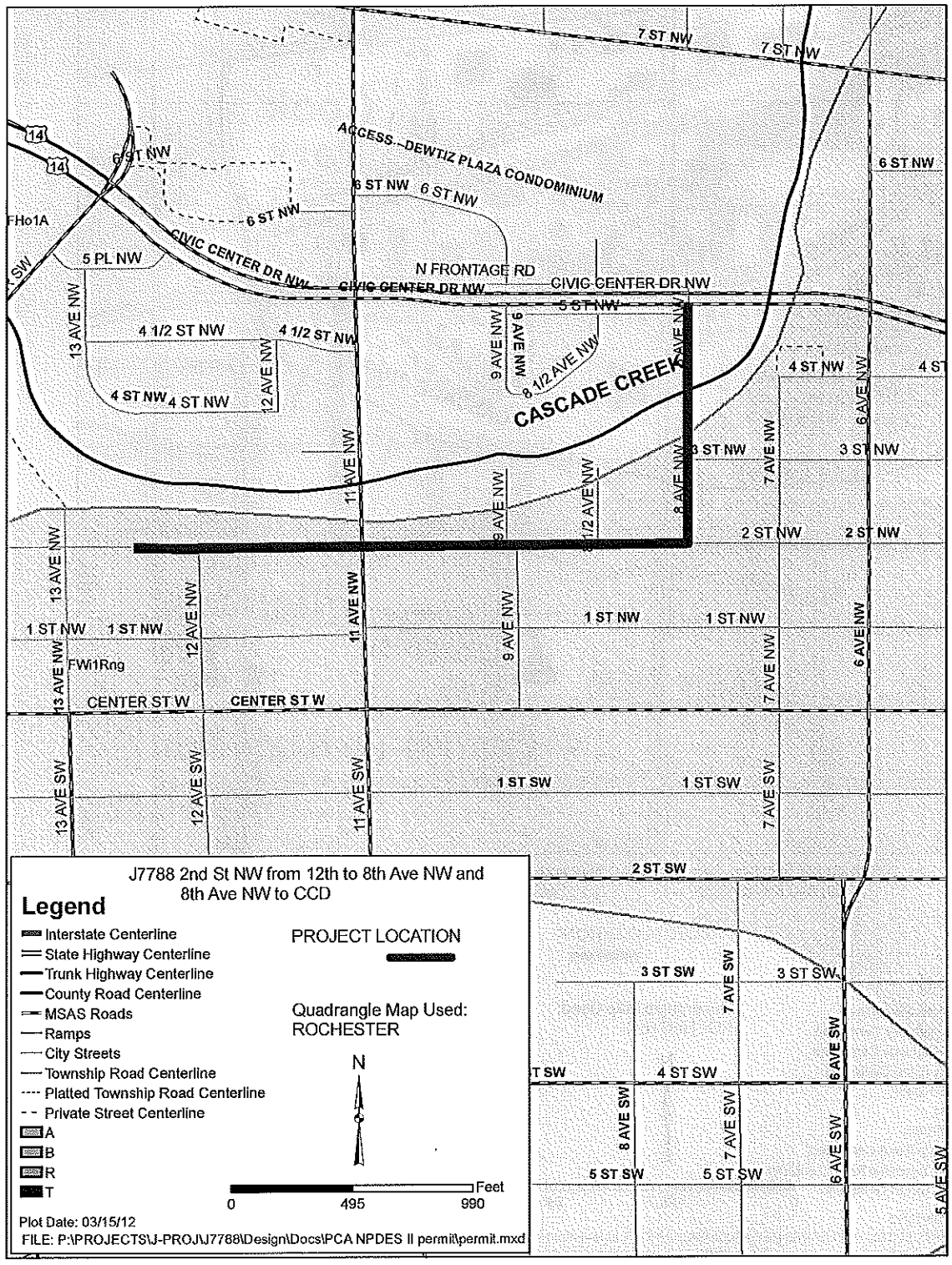
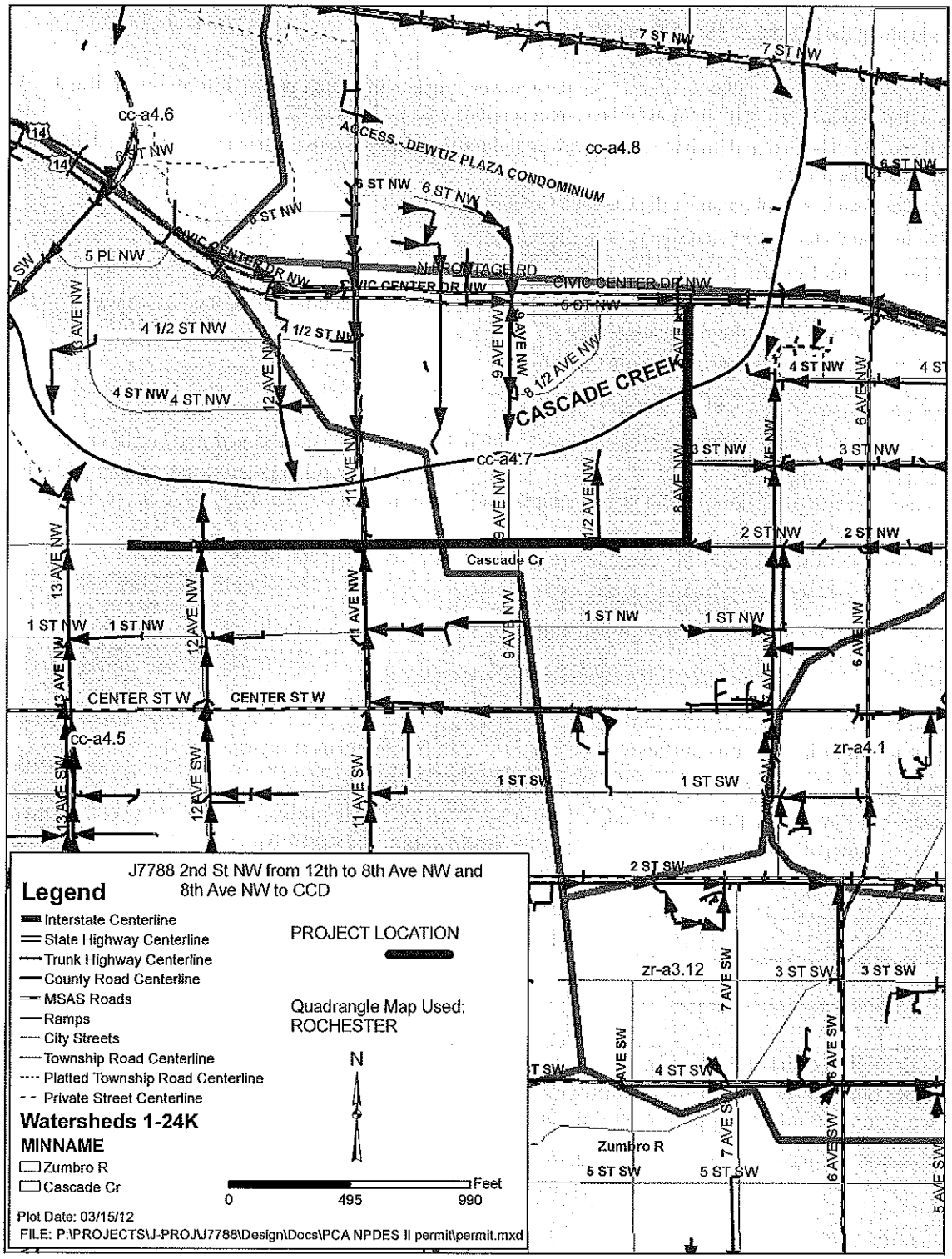


FIGURE 3 – DEPARTMENT OF NATURAL RESOURCES (DNR) WATERSHEDS MAP



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201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

CONSTRUCTION PROJECT INFORMATION (III.A)

Describe the construction activity (what will be built, general timeline, etc.)

The project site is along the existing 2nd St NW and 8th Ave NW urban roadway between 12th Ave NW and Civic Center Drive NW

Utility construction includes the installation of a21" Sanitary Sewer Trunkmain, watermain and storm sewer. Road reconstruction includes concrete and bituminous urban street sections with pedestrian facilities.

This project will replace the existing deficient sanitary sewer and traffic calming roadway features. Drainage deficiencies will be addressed with the project.

This project includes a sanitary siphon under the Cascade Creek.

See also the grading and underground plan sheets for project features.

Describe soil types found at the project.

The soils are classified by the Soil Conservation Service as Type T (Non-Glacial source Terrace) on 2nd St NW, and SCS A (Alluvium) soils on 8th Ave NW north of Cascade Creek

See Figure 2 –Olmsted County Geologic Atlas Soil Types Map.

Describe watershed/drainage areas found at the project.

The roadway exists within 1 minor watershed Cascade Creek within the major watershed named Zumbro River.

The entire Cascade Creek watershed is about 4,261 acres of largely level, rural agricultural landscape. The project is located within approximately 5 acres of the lower portions of a contributory basins named Cascade Creek – Area (cc-a4.5, cc-a4.7), which has a total area of 406 acres.

This project does involve work located in the Cascade Creek area as a siphon open cut under it.

Project Size (number of acres to be disturbed)

Construction limits contain approximately 4.5 acres of City right of way, City Parkland.

Cumulative Impervious Surface

Existing area of impervious surface 2.3 (to the nearest quarter acre)

Post construction area of impervious surface 2.2 (to the nearest quarter acre)

Receiving Waters

Name of Water Body	**Type** (ditch, pond, wetland, lake, stream, river)	**Special Water?** (See Stormwater Permit Appendix A)	**Impaired Water?**** (See Stormwater Permit Appendix A)
Cascade Creek	Creek	☐ Yes X No	X Yes ☐ No
		☐ Yes ☐ No	☐ Yes ☐ No
		☐ Yes ☐ No	☐ Yes ☐ No

*Water Body ID might not be available for all water bodies. Use the Special and Impaired Waters Search Tool at: www.pca.state.mn.us/water/stormwater/stormwater-c.html

** Impaired water for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen, or biotic impairment

GENERAL SITE INFORMATION (III.A)
Describe the location and type of all temporary and permanent erosion prevention and sediment control BMPs. Include the timing for installation and procedures used to establish additional temporary BMPs as necessary. (III.A.4.a) In addition to Division S section (2573) Temporary and (2575) Permanent Erosion Control and Turf Establishment: In areas within 200 feet of surface waters, Mn/DOT rapid stabilization method 5 will be used. Areas within 10 feet of the pavement will be seeded and immediately mulched and anchored.
Refer to the Estimated Quantities plan sheet for the anticipated quantities for the life of the project for all erosion prevention and sediment control BMPs (III. A. 4.b)
Refer to the plans for the following features (III.A.3.b – f): • Existing and final grades, including dividing lines and direction of flow for all pre and post-construction stormwater runoff drainage areas located within the project limits. • Locations of impervious surfaces and soil types. • Locations of areas not to be disturbed. • Location of areas of phased construction. • All surface waters and existing wetlands within 1-mile from the project boundaries that will receive stormwater runoff from the site (identifiable on maps such as USGS 7.5 minute quadrangle maps, see Figure 1 – Project Location Quadrangle Map). Where surface waters receiving runoff associated with construction activity will not fit on the plan sheet, they must be identified with an arrow, indicating both direction and distance to the surface water. • Methods to be used for final stabilization of all exposed soil areas.
Were stormwater mitigation measures required as the result of an environmental, archaeological, or other required local, state, or federal review of the project? If yes, describe how these measures were addressed in the SWPPP. (III.A.6.) No.
Is the project located in a karst area such that additional measures would be necessary to protect drinking water supply management areas as described in Minn. R. chapters 7050 and 7060? If yes, describe the additional measures to be used. (III.A.7.) No.
Does the site discharge to a calcareous fen listed in Minn. R. 7050.0180, subp. 6.b.? If yes, a letter of approval from the Minnesota Department of Natural Resources must be obtained prior to application for this permit. (Part I B.6 and Part III.A.8) No.
Does the site discharge to a water that is listed as impaired for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen or biotic impairment? Use the Special and Impaired Waters Search Tool at: www.pca.state.mn.us/water/stormwater/stormwater-c.html. If no, skip to next box. Does the Impaired water have an approved TMDL with an Approved Waste Load Allocation for construction activity? If yes: a. List the receiving water, the areas of the site discharging to it, and the pollutant(s) identified in the TMDL b. List the BMPs and any other specific construction stormwater related implementation activities identified in the TMDL. If the site has a discharge point within one mile of the impaired water and the water flows to the impaired water but no specific BMPs for construction are identified in the TMDL, the additional BMPs in Appendix A (C.1 and C.2) must be added to the SWPPP and implemented. (III.A.7). The additional BMPs only apply to those portions of the project that drain to one of the identified discharge points. No.

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

TRAINING (III.A)

Training is required for all permitted projects after February 1, 2010. It must be provided by entities with expertise in erosion prevention, sediment control or permanent stormwater management. Training must be focused on the individual's job duties as they relate to the permit requirements (Part III.A.2). Who must be trained?

Individual(s) preparing the SWPPP for the project

Individual(s) overseeing the implementation of, revising and amending the SWPPP and individuals performing inspections required by the permit

Individuals performing or supervising the installation, maintenance or repair of BMPs

Names of the personnel trained; dates of training; name of instructor(s) and entity

providing training; content of training course or workshop (including number of hours of training)

Part III A 2 (c) Training documentation: Names and certification of the personnel associated with the project through the University of Minnesota, Minnesota Erosion Control Association,

ED 3001 Design of Construction Stormwater Pollution Prevention Plans. This two-day course is for personnel involved with the design of construction stormwater pollution prevention plans.

Name	Company	Expire Date
Horstmann, Al	City of Rochester	May 31, 2013
Kelm, Russ	City of Rochester	May 31, 2013

EM 2001 Construction Site Management. This two-day course is designed for those who supervise, run, or direct construction site operations, grading work, culvert replacement work, and bridge construction work.

Name	Company	Expire Date
Dwyer, Dave	City of Rochester	May 31, 2014
Klein, Tim	City of Rochester	May 31, 2014
Lucas, Dave	City of Rochester	May 31, 2013
Moore, David	City of Rochester	May 31, 2013
Szuberski, Steve	City of Rochester	May 31, 2014

Certified Professional in Erosion and Sediment Control. A CPESC is a recognized specialist in soil erosion and sediment control. CPESCs have educational training, demonstrated expertise, experience in controlling erosion and sedimentation, and meet certification standards, exam given through EnviroCert International, Inc

Name	Company	Cert Date
Kraszewski, Mike	City of Rochester	Mar 21, 2009

SELECTION OF A PERMANENT STORMWATER MANAGEMENT SYSTEM (III.C)

Will the project create a new cumulative impervious surface greater than or equal to one acre? □ Yes X No

If yes, a water quality volume of ½ inch of runoff from this area must be treated before leaving the site or entering surface

waters (1 inch if discharging to special waters).

Describe which method will be used to treat runoff from the new impervious surfaces created by the project (III.C):

- Wet sedimentation basin
- Infiltration/Filtration
- Regional ponds
- Combination of practices

Include all calculations and design information for the method selected. See Part III.C of the permit for specific requirements associated with each method.

Water quality volume calculations:

If it is not feasible to meet the treatment requirement for the water quality volume, describe why. This can include proximity to bedrock or road projects where the lack of right of way precludes the installation of any permanent stormwater management practices. Describe what other treatment, such as grasses swales, smaller ponds, or grit chambers, will be implemented to treat runoff prior to discharge to surface waters. (III.C)

If proposing an alternative method to treat runoff from the new impervious surfaces, describe how this alternative will achieve approximately 80% removal of total suspended solids on an annual average basis (III.C.5). NOTE: If proposing an alternative method, you must submit your SWPPP to MPCA at least 90 days prior to the starting date of the construction activity.

RECORDS RETENTION (III.D)

Describe your record retention procedures (must be kept at the site) (III.D). Records must include:

- Copy of SWPPP and any changes
- Training documentation (III.A.2.)
- Inspection and maintenance records
- Permanent operation and maintenance agreements
- Calculations for the design of temporary and permanent stormwater management systems.

An inspection log will be kept on-site and will include the results of all inspections on the City Permitrack records system. The schedule for the inspections is a minimum of once every 7 days and within 24 hours of a rainfall exceeding 0.5" in 24 hours.

EROSION PREVENTION PRACTICES (IV.B)

Describe construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices to minimize erosion. Delineate areas not to be disturbed (e.g., with flags, stakes, signs, silt fence, etc.) before work begins.

See Construction Erosion Control/Turf Establishment Plans. All disturbed soils will be seeded, mulched, anchored, and fertilized within 7 days as per NPDES Permit Appendix A Section C.1.

General Sequencing:

1. Staging of the project will be required to minimize disruption of traffic and exposed soils.
2. Install silt fence, inlet protection, or Biorolls at locations around the perimeter as shown on the plans.
3. Keep abutting property owners informed in advanced when areas are going to be disturbed.
4. Clear and grub, utility removals/relocations.
5. Install temporary sediment basin/sediment trap outlet if trench dewatering discharge is necessary and according to the discharge permit.
6. Trench excavate and backfill for installation of utilities. The Contractor shall conduct extreme care for the excavation of soils on this project to maintain soil separation of the naturally occurring soil Horizon or Layers. This is to allow for the soils in the different horizons to be restored to their native layers. In addition at least 6 inches of topsoil shall be salvaged and reinstalled as a top dressing in seeding areas and 3 inches in sodded areas.
7. Construct embankment.
8. Construct curb and gutter
9. Pave.
10. right of way areas will be hydro-seeded with a Commercial Seed mix No 260 or sod, Ditch areas will receive erosion control sod, stabilization mats, erosion control blankets depending on slope, and seed mix no 310 or 350.
11. Other residential roadway right-of-way and Out lot areas disturbed on the project will be will be restored with Sod.
12. Restore driveways, pedestrian facilities, and boulevards.
13. Complete final vegetation restoration, hydro-seeding, and sod.

Describe temporary erosion protection or permanent cover used for exposed soil. All exposed soil areas must be stabilized as soon as possible but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently (part IV.B.2)

All disturbed soils will be seeded, mulched, anchored, and fertilized within 7 days. Some areas will be sodded and fertilized. For disturbed soil within 200 lineal feet of a surface water, rapid stabilization method 2 or 3 will be used. Rapid stabilization methods entail hydroseeding, mulching, and fertilizing within 7 days of soil disturbance.

For drainage or diversion ditches, describe practices to stabilize the normal wetted perimeter within 200 lineal feet of the property edge or point of discharge to surface water. The remaining portions of the temporary or permanent ditch or swale must be stabilized within 14 days after connecting to surface waters and construction in that portion of the ditch has temporarily or permanently ceased.

Describe other erosion prevention practices (list and describe).

Construction Staging is required to reduce exposed areas. Open cut methods will be used by river. Rip rap will be installed in sensitive areas and streams to prevent scour and erosion. Biorolls will be placed where silt fence is not practical and in the along areas with steeper slopes to reduce flows, promote infiltration and sedimentation.

SEDIMENT CONTROL PRACTICES (IV.C)

Describe sediment control practices used to minimize sediments from entering surface waters, including curb and gutter systems and storm drain inlets. At a minimum, these sediment control practices must include:

• Sediment controls for temporary or permanent drainage ditches and sediment basins that are designed as part of a treatment system

• Installation of check dams or other grade control practice to ensure sheet flow and prevent rills (for slope lengths

greater than 75 feet with a grade of 3:1 or steeper).

- Sediment control practices on all down gradient perimeters prior to land disturbing activities.
- Storm drain inlet protection for all inlets.
- Silt fencing or other sediment control surrounding temporary soil stockpiles.
- Minimize vehicle tracking of sediments (e.g., stone pads, concrete or steel wash racks, or equivalent systems).
- Street sweeping of tracked sediment.
- Temporary sedimentation basins (see Part III.B).

Biorolls will provide sedimentation along the ditches; silt fence will encompass the remaining project to control sediment within the project area.

Inlet protection will control sediment at structures. Stabilized vehicle entrances will be constructed as shown on plans. Vegetation restoration and sodding will stabilize soils surfaces.

Timing:

1. Install silt fence prior to clear and grub operations.
2. Install inlet protection.
3. Water for dust control as needed.
4. Install Rapid Stabilization Method 3 within 7 days of finish grading by the Contractor.
5. Install permanent turf establishment within 7 days of finish paving operations.
6. Inform abutting property owners of care for permanent turf establishment.

DEWATERING AND BASIN DRAINING (IV.D)

Will the project include dewatering or basin draining? ☐ Yes X No

If yes, describe BMPs used so the discharge does not adversely affect the receiving water or downstream landowners.

The project **will not** include dewatering for the entire project. The Contractor shall be responsible for obtaining a Water Appropriation Permit from the Department of Natural Resources (DNR) if necessary. The Contractor will also be responsible for obtaining all other necessary permits and approvals, as well as all fees and documentation associated with the permits.

Additional BMPs for Special Waters and Discharges to Wetlands (Appendix A, Parts C and D)

Special Waters. Does your project discharge to special waters? ☐ Yes X No If no, skip to Wetlands section below.

If proximity to bedrock or road projects where the lack of right of way precludes the installation of any of the permanent stormwater management practices, then other treatment such as grassed swales, smaller ponds, or grit chambers is required prior to discharge to surface waters. Describe what other treatment will be provided.

Describe erosion and sediment controls for exposed soil areas with a continuous positive slope to a special waters, and temporary sediment basins for areas that drain 5 or more acres disturbed at one time.

Describe the undisturbed buffer zone to be used (not less than 100 linear feet from the special water).

Describe how the permanent stormwater management system will ensure that the pre and post project runoff rate and volume from the 1, and 2-year 24-hour precipitation events remains the same.
Describe how the permanent stormwater management system will minimize any increase in the temperature of trout stream receiving waters resulting in the 1, and 2-year 24-hour precipitation events.
Wetlands. Does your project discharge stormwater with the potential for significant adverse impacts to a wetland (e.g., conversion of a natural wetland to a stormwater pond)? ☐ Yes X No
If Yes, describe the wetland mitigation sequence that will be followed in accordance with Part D of Appendix A. Less than 1,000 sq ft of wetland creek area will be disturbed on the project.

INSPECTIONS AND MAINTENANCE (IV.E)

Describe procedures to routinely inspect the construction site:

- Once every seven (7) days during active construction and,
- Within 24 hours after a rainfall event greater than 0.5 inches in 24 hours, and within seven (7) days after that.

Inspections must include stabilized areas, erosion prevention and sediment control BMPs, and infiltration areas.

Inspection and maintenance practices:

In addition to complying with the requirements of the NPDES permit, the Erosion Control (EC) Supervisor shall inspect erosion control measures on a weekly basis and after each 1/2" rain event. Inspections are required to be documented by the EC Supervisor. The City of Rochester shall create a job/permit on a website provided by the City (PermiTrack). Further, the City will provide the EC Supervisor with a permit number and access code for the job on the website.

The EC Supervisor shall:

a. Within ten (10) working days of receipt of the permit number and access code, enter the website and create a list of site erosion control practices that are proposed on the approved plan.
b. Within ten (10) working days of actual start of work – enter the website and document that the practices that have been installed in accordance with the approved plan.
c. Provide weekly and event driven erosion inspection documentation of the condition of the practices and note any repairs needed and actions taken.
d. Within ten (10) working days of completion of the project, enter the project and note that the project has been terminated and a notice of termination (NOT) has been submitted to the Minnesota Pollution Control Agency.
e. Upon written or verbal notice by an agent at the City of Rochester to the supervisor or the supervisor's designated representative regarding an erosion control action or repair needed to bring the site into compliance the supervisor shall have not less than 24 nor more than 72 hours to bring the project site into compliance and document those actions on the website. The time allotted to bring the site into compliance shall be noted on the notice.

POLLUTION PREVENTION MANAGEMENT MEASURES (IV.F)
Describe practices to properly manage and dispose of solid waste, including trash (IV.F.1) As per NPDES Permit Part IV.F.1 all collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes will be disposed properly and comply with MPCA disposal requirements and Mn/DOT Specification 1717.A4.
Described practices to properly manage hazardous materials (IV.F.2). As per NPDES Permit Part IV.F.2 Oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
Describe practices for external washing of trucks and other construction vehicles (IV.F.3) As per NPDES Permit Part IV.F.3 External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.
Describe how are you going to provide a safe, leak proof, concrete washout on site (IV.F.4): To be completed by contractor. Or follow: 1. External washing of trucks and construction vehicles will be limited to a defined staging area. Runoff will be contained and properly disposed of. 2. Engine degreasing is not allowed on site. 3. Concrete trucks are to wash out or discharge surplus concrete or drum wash water within a designated location away from stormwater drains and waterways.
Describe your spill prevention plan. To be completed by contractor.
Describe measures to address sanitary and septic waste. Sanitary and septic waste disposal will comply with the MPCA Septage Management Guidelines incorporating 40 CFR part 503.
FINAL STABILIZATION (IV.G)
Describe how you will achieve final stabilization of the site (IV.G). See Erosion Control/Turf Establishment Plan sheets. Final stabilization will be achieved by seeding, mulching, anchoring, and fertilizing. In other areas, sodding and fertilizing will occur. In ditch areas concrete armor and/or stabilization mats will be installed to promote stabilization. All soil disturbing activities at the site have been completed and all soils must be stabilized by a uniform perennial vegetative cover with a density of 70% over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions. All sediment must be removed from conveyance systems and ditches must be stabilized with permanent cover. Prior to submission of the Notice of Termination (NOT), all temporary synthetic and structural erosion prevention and sediment control BMPs (such as silt fence) must be removed on the portions of the site for which the Permittee is responsible. BMPs designed to decompose on site (such as some compost logs) may be left in place.

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

NPDES STORM WATER PERMIT:

Minnesota Pollution Control Agency

Coverage Card

Construction Stormwater
National Pollutant Discharge Elimination System/State Disposal System General Permit MNR100001

The Construction site identified below is covered under the National Pollutant Discharge Elimination System/State Disposal System General Permit MNR100001 and is authorized by the Minnesota Pollution Control Agency (MPCA) to discharge stormwater associated with construction activities.

Permit ID Number: C00033405
Owner: City of Rochester
General Contractor: City of Rochester
Project Name: J7788 2nd St NW from 12th to 8th Ave NW CSW

Permit Coverage Date: 3/21/2012

If you have questions regarding the stormwater program for construction activity, please access the MPCA Stormwater website at http:www.pca.state.mn.us/stormwater, or call the Construction Stormwater Program at 651-757-2119 or toll free at 800-657-3804.

APPLICATION FOR PERMIT TRANSFER/MODIFICATION:

This form is to transfer a permit or modify permit information for a permitted site with an existing SWPPP.
An Application for General Stormwater Permit for Construction Activity must be used to obtain a new permit.
Use a *Subdivision Registration* when ownership for a permitted site shifts from one party to multiple other parties.

Minnesota Pollution Control Agency

National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS)
General Stormwater Permit for Construction Activity (MN R100001)

Application for Permit Transfer/Modification

Minnesota Pollution Control Agency
Construction Stormwater Permit Program — NO FEE
520 Lafayette Road North, St. Paul, MN 55155-4194

Refer to the NPDES/SDS General Stormwater Permit for Construction Activity (MN R100001) and the original owner's coverage notification letter as you complete this form. Call the MPCA Customer Assistance Center at 651-297-2274 or 800-646-6247 (in Minnesota) for assistance.

Should you fill out this form? This application can only be used to transfer the permit responsibility for the entire site. If you wish to transfer the responsibility of a portion of the site, you must use the Subdivision Registration application, available on the MPCA's Web site, www.pca.state.mn.us/water/stormwater/stormwater-c.html

Construction Activity Information

1. **Stormwater Permit Identification Number** *See Notice of Stormwater Permit Coverage or coverage notification letter* — MN R100001-C000 [3] [3] [4] [0] [5]
2. **Project Name (As listed on the initial permit application)** — J7788 2nd St NW from 12th to 8th Ave NW and 8th Ave
3. **Owner Name (As listed on the initial permit application)** — City of Rochester
4. **Contractor Name (As listed on the initial permit application)** — City of Rochester

Permit Transfer or Modification Information

5. **Reason for Application (check all that apply)**

- ☐ New Project Name _____
- ☒ New Contractor
- ☐ New Owner
- ☐ Contractor Name Change
- ☐ Owner Name Change
- ☐ Contractor Address Change
- ☐ Owner Address Change

6. **Effective Date of Change** — / / 2012

wq-strm2-56 — 1 of 2 — September 2003

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

Responsible Parties

7. New or Same Owner

same

Business or Firm Name			Federal Tax ID		State Tax ID ( ) - ext.
Last Name	First Name	Title	E-mail		Telephone *(include area code)*
Mailing Address			City	State	Zip Code ( ) - ext.
Last Name (Alternate Contact)	First Name		E-mail		Telephone *(include area code)*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the NPDES/SDS General Stormwater Permit Construction Activity (MN R100001) that authorizes Stormwater discharges associated with the construction site identified on this form.

X

Authorized Signature Date

The Application for Permit Transfer or Modification form must be signed by:

- ***Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application.*
- ***Partnership or Sole Proprietorship:** a general partner or the proprietor.*
- ***Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

8. New or Same Contractor

Business or Firm Name			Federal Tax ID		State Tax ID ( ) - ext.
Last Name	First Name	Title	E-mail		Telephone *(include area code)*
Mailing Address			City	State	Zip Code ( ) - ext.
Last Name (Alternate Contact)	First Name		E-mail		Telephone *(include area code)*

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage this system, or the persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the NPDES/SDS General Stormwater Permit for Construction Activity (MN R100001) that authorizes Stormwater discharges associated with the construction site identified on this form.

X

Authorized Signature Date

The Application for Permit Transfer or Modification form must be signed by:

- ***Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application.*
- ***Partnership or Sole Proprietorship:** a general partner or the proprietor.*
- ***Municipality, State, Federal or Other Public Agency:** principal executive officer or ranking elected official.*

ATTACHMENTS TO THE SPECIAL PROVISIONS

SOIL BORING INFORMATION

12-14-10 & 12-15-10
D.M. Operator/Measurements
J.S. Notes/Augers/Samples
A.M. Soil Classifications

BORING	#	**1**	**12' West of East Property Line of 926 2nd Street NW**
			15' south centerline of roadway
0	–	4 3/4"	Bituminous
4 3/4"	–	5 1/4"	Concrete Base
5 1/4"	–	3.9'	Silt Loam
3.9'	–	7.0'	Sandy Loam
7.0'	–	17.2'	Clay Loam
			At 17.2' Deep - Refusal - Limestone
			Begin ground water at 15.0' deep
			End Boring

BORING	#	**2**	**2nd Street & 9th Avenue NW Intersection**
			6' east & 5' north of sanitary manhole
0	–	4 3/4"	Bituminous
4 3/4"	–	8 1/4"	Concrete Base
8 1/4"	–	4.1'	Loam
4.1'	–	16.6'	Sandy Loam
			At 16.6' Deep - Refusal - Limestone
			No ground water encountered
			End Boring

BORING	#	**3**	**2nd Street & 8 1/2 Avenue NW Intersection**
			5' east & 5' north of sanitary manhole
0	–	6 1/4"	Bituminous
6 1/4"	–	9"	Concrete Base
9"	–	3.7'	Silt Loam
3.7'	–	9.8'	Sandy Loam
9.8'	–	10.4'	Weathered Limestone
			At 10.4' Deep - Refusal - Limestone
			No ground water encountered
			End Boring

BORING	#	**4**	**2nd Street & 8th Avenue NW intersection**
			2' east & 6' north of sanitary manhole
0	–	5"	Bituminous
5"	–	9"	Concrete Base
9"	–	5.0'	Silt Loam

5.0'	–	11.4'	Sandy Loam (with a few pieces of gravel/limestone)
			At 11.4' Deep - Refusal - Limestone
			No ground water encountered
			End Boring

BORING # 5 **8th Avenue & 3rd Street NW Intersection**

6' east & 6' south of sanitary manhole

0	–	10"	Bituminous
10"	–	11"	Concrete Base
11"	–	1.5'	Granular Material (sand/pieces of crushed limestone)
1.5'	–	3.3'	Silty Clay
3.3'	–	10.9'	Sandy Loam
			At 10.9' Deep - Refusal - Limestone
			No ground water encountered
			End Boring

BORING # 6 **8th Avenue NW - 300 Block (north end of bituminous roadway)**

Centerline of Roadway

0	–	4"	Bituminous
4"	–	12"	Crushed Limestone
12"	–	4.0'	Silt Loam
4.0'	–	7.5'	Loam
7.5'	–	11.0'	Sandy Loam/Silty Clay/Clay
11.0'	–	13.0'	Weathered Limestone
			At 13.0' Deep - Refusal - Limestone
			No ground water encountered
			End Boring

BORING # 7 **8 Ave NW - 400 Block (south end of bituminous roadway)**

Centerline of Roadway

0	–	6"	Bituminous
6"	–	18.0'	Loam/Sandy Loam
18.0'	–	23.0'	Sand
23.0'	–	35.0'	No Description
35.0'	–	38.8'	Weathered Limestone
			At 38.8' Deep - Refusal - Limestone
			Begin ground water at 15.0' deep
			End Boring

10/07/11
J.S. Operator/Measurements
A.M. Soil Classifications/Report

BORING # 1 **50' West center of 11 Avenue NW**

12' south centerline of 2nd Street NW

0	–	7 1/2"	Bituminous
7 1/2"	–	11 1/2"	Concrete Base
11 1/2"	–	3.7'	Soil/Granular Material (appears as a fill)
3.7'	–	6.2'	Sandy Loam
6.2'	–	8.6'	Clay loam
8.6'	–	16.1'	Sandy Loam
			At 16.1' Deep - Refusal - Limestone
			Begin ground water at 15' deep
			End Boring

BORING	#	**2**	**24.5' West center of 12 Avenue NW**
			6.5' south centerline of 2nd Street NW
0	–	4 1/2"	Bituminous
4 1/2"	–	16 1/8"	Crushed Limestone Base
16 1/8"	–	5'	Loam/Sandy Loam
5'	–	8'	Loamy Sand
8'	–	13'	Silty Clay/Clay
13'	–	19.1'	Silt Loam
			At 19.1' Deep - Refusal - Limestone
			Begin ground water at 18' deep
			End Boring

BORING	#	**3**	**West Property Line of 1217 2nd Street NW**
			12.8' north centerline of 2nd Street NW
0	–	3 3/4"	Bituminous
3 3/4"	–	7 3/4"	Concrete Base
7 3/4"	–	5'	Loam
5'	–	8'	Sandy Loam
8'	–	10'	Loamy Sand
10'	–	21.2'	Sand/Loamy Sand
			At 21.2' Deep - Refusal - Limestone
			Begin ground water at 18' deep
			End Boring

NOTES:
GENERAL SAMPLING LIMITATIONS APPLY FOR FLIGHT AUGER BORINGS
SOIL BORINGS PERFORMED WITH A FOUR-INCH DIAMETER FLIGHT AUGER
SOILS CLASSIFIED ACCORDING TO THE MN/DOT TEXTURAL CLASSIFICATION SYSTEM
SAND CONTAINS A SMALL AMOUNT OF GRAVEL
GROUND WATER ENCOUNTERED (AS NOTED) DURING BORING
GOPHER STATE ONE-CALL # 100616976

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

SOIL BORING INFORMATION (AET)

9 sheets

Rec 4-8-11

AMERICAN ENGINEERING TESTING, INC.

CONSULTANTS
- GEOTECHNICAL
- MATERIALS
- ENVIRONMENTAL

April 7, 2011

Rochester Public Works
24 Civic Center Drive NE
Rochester, MN 55906

Attn: Jim Loehr

RE: Trunk Line Sanitary Sewer
2nd St. NW & 8th Ave NW
Rochester, MN
AET#11-05426

Dear Mr. Loehr:

Please find the attached soil boring logs for the above referenced project. The boring locations are as follows:

B-1	2nd St. & 9th Ave NW (6' east and 5' north of sanitary manhole)
B-2	2nd St. & 8½th Ave NW (5' east and 5' north of sanitary manhole)
B-3	2nd St. & 8th Ave NW (2' east and 6' north of sanitary manhole)
B-4	8th Ave & 3rd St. NW (6' east and 6' south of sanitary manhole)
B-5	8th Ave NW - 300 block north end of bituminous roadway (centerline of roadway)
B-6	Station 6+29.22
B-7	Station 6+75
B-8	Station 7+30.23

We appreciate the opportunity to assist you on this project. If you have questions regarding the information in this report, or if we can be of additional service, please call us.

Sincerely,

American Engineering Testing, Inc.

Alec Hovick
Manager – Rochester
Phone: (507) 281-3547
Fax: (507) 281-4941
Email: ahovick@amengtest.com

AJH/ajd

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **11-05426** LOG OF BORING NO. **B-1 (p. 1 of 1)**

PROJECT: **2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN**

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	REC %	RQD IN.	RQD %	%-#200
1–12	No Samples Taken From 0' to 12.5'										
13–15	DOLOMITE & SANDY DOLOMITE, tan Weathering: Moderately Weathered Fracturing: Very fractured to moderately fractured Stratification: Thinly laminated Hardness: Hard	PRAIRIE DU CHIEN GROUP, SHAKOPEE FORMATION			NQ	54		90	39.6	66	
16–19					NQ	28.8		96	24	80	
20	**END OF BORING** Boring located adjacent to City of Rochester Boring # 2										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-12.5' 3.25" HSA							
12.5'-20' NQ Core	**3/21/11**			**12.5'**	**12.5'**		**None**
BORING COMPLETED: **3/21/11**							
DR: **JB** LG: **DM** Rig: **43R**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 11-05426 LOG OF BORING NO. B-2 (p. 1 of 1)

PROJECT: 2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	REC %	RQD IN.	RQD %	%-#200
1–13	No Samples Taken From 0' to 13.2'										
14–16	DOLOMITE & SANDY DOLOMITE, tan Weathering: Moderately Weathered Fracturing: Very fractured to moderately fractured Stratification: Thinly laminated Hardness: Hard	PRAIRIE DU CHIEN GROUP, SHAKOPEE FORMATION			NQ	57.6		100	27.6	48	
17–18	**END OF BORING** Boring located adjacent to City of Rochester Boring # 3										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-13.6' 3.25" HSA								
13.6'-18' NQ Core	3/22/11			13.2'	13.2'		None	
BORING COMPLETED: 3/22/11								
DR: JB LG: DM Rig: 43R								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **11-05426** LOG OF BORING NO. **B-3 (p. 1 of 1)**

PROJECT: **2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN**

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	REC %	RQD IN.	RQD %	%-#200
1–12	No Samples Taken From 0' to 12'										
12	DOLOMITE, tan Weathering: Moderately Weathered Fracturing: Very fractured to moderately fractured Stratification: Thinly laminated Hardness: Hard	PRAIRIE DU CHIEN GROUP, SHAKOPEE FORMATION			NQ	27.6		92	21	70	
17					NQ	60		100	43.2	72	
20					NQ	3.6		60	0	0	
	END OF BORING Boring located adjacent to City of Rochester Boring # 4										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-12' 3.25" HSA								
12'-20' NQ Core	**3/23/11**			**12'**	**12'**		**None**	
BORING COMPLETED: **3/23/11**								
DR: **JB** LG: **DM** Rig: **43R**								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **11-05426** LOG OF BORING NO. **B-4 (p. 1 of 1)**

PROJECT: **2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN**

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	REC %	RQD IN.	RQD %	%-#200
1–11	No Samples Taken From 0' to 11.5'										
12–15	DOLOMITE and SANDY and SHALEY DOLOMITE, tan to greenish Weathering: Moderately Weathered Fracturing: Very fractured Stratification: Thinly laminated Hardness: Stiff to hard	PRAIRIE DU CHIEN GROUP, SHAKOPEE FORMATION			NQ	48		100	19.2	40	
16					NQ	6		100	0	0	
	END OF BORING Boring located adjacent to City of Rochester Boring # 5										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-11.5' 3.25" HSA								
11.5'-16' NQ Core	**3/21/11**			**11.5'**	**11.5'**		**None**	
BORING COMPLETED: **3/21/11**								
DR: **JB** LG: **DM** Rig: **43R**								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **11-05426** LOG OF BORING NO. **B-5 (p. 1 of 1)**

PROJECT: **2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN**

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	REC %	RQD IN.	RQD %	%-#200
1–14	No Samples Taken From 0' to 15'										
15–16	DOLOMITE, tan Weathering: Moderately Weathered Fracturing: Very fractured Stratification: Thinly laminated Hardness: Hard	PRAIRIE DU CHIEN GROUP, SHAKOPEE FORMATION			NQ	6		50	0	0	
	END OF BORING Boring located adjacent to City of Rochester Boring # 6										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-15' 3.25" HSA							
15'-16' NQ Core	**3/21/11**			**15'**	**15'**		**None**
BORING COMPLETED: **3/21/11**							
DR: **JB** LG: **DM** Rig: **43R**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 11-05426 LOG OF BORING NO. B-6 (p. 1 of 1)

PROJECT: 2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN

DEPTH IN FEET	SURFACE ELEVATION: ____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	REC %	RQD IN.	RQD %	%-#200
1-4	FILL, silty sand with trace gravel, dark brown	FILL	6	M	SS	19					
			5	M	SS	14					
5-7	FILL, lean clay, dark brown		5	M	SS	12					
8-9	SANDY LEAN CLAY with a little limestone gravel and a few slabs, brown, hard (CL)	MIXED ALLUVIUM	36	M	SS	11					
10-17	CLAYEY SAND with limestone gravel and slabs, brown, dense to medium dense (SC)	COARSE ALLUVIUM	20	M	SS	10					
			30	W	SS	11					
			16	W	SS	14					
18-30	DOLOMITE and SANDY DOLOMITE, tan Weathering: Moderately Weathered Fracturing: Very fractured Stratification: Thinly laminated Hardness: Hard	PRAIRIE DU CHIEN GROUP, SHAKOPEE FORMATION			NQ	24		67	0	0	
			61/12"	W	SS	10					
		fractured rock									
			50/.2	M	SS	2					
		solid ↓									
					NQ	60		100	42	70	
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-17' 3.25" HSA								
17'-20' NQ Core	4/5/11	11:30	13.5'	12'	12'		7.6'	
20'-24.7' 3.25" HSA								
BORING COMPLETED: 4/5/11								
DR: GH LG: EW Rig: 69C								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 11-05426 LOG OF BORING NO. B-7 (p. 1 of 1)

PROJECT: 2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	REC %	RQD IN.	RQD %	%-#200
1	SAND with gravel, medium grained, brown (SP)	COARSE ALLUVIUM	2	M	SS	8					
4	SAND with SILT and gravel, medium grained, dark brown, medium dense (SP-SM)		26	W	SS	10					
5			10	W	SS	12					
7	SILTY SAND with limestone gravel and slabs, brown, medium dense (SM)		17	M	SS	19					
10	SAND with SILT and limestone gravel and slabs, brown, medium dense to very dense (SP-SM)	COARSE ALLUVIUM possible WEATHERED BEDROCK	15	W	SS	10					
13			14	M	SS	17					
14	DOLOMITE, SANDY and SHALEY DOLOMITE, tan Weathering: Moderately Weathered Fracturing: Very to moderately fractured Stratification: Thinly laminated Hardness: Hard	PRAIRIE DU CHIEN GROUP, SHAKOPEE FORMATION	62	W	SS	24					
17		Soft	100/.0	M	SS	6					
18					NQ	24		100	18	75	
22					NQ	54		100	21	39	
24	**END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-17.5' 3.25" HSA								
17.5'-24' NQ Core	4/4/11	2:30	4'	2'	4'		1.8'	
BORING COMPLETED: 4/4/11								
DR: GH LG: EW Rig: 69C								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 11-05426 LOG OF BORING NO. B-8 (p. 1 of 1)

PROJECT: 2nd St. NW & 8th Ave. NW Sanitary Sewer, Project J7788; Rochester, MN

DEPTH IN FEET	SURFACE ELEVATION: _____ MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	3" BITUMINOUS PAVEMENT	BITUMINOUS PAVEMENT		M							
2	FILL, crushed limestone gravel base, tan	FILL									
3	FILL, Sandy Loam with gravel, black to dark gray, brick, concrete and wood demolition debris		16	M	SS	15					
4											
5			15	M	SS	8					
6											
7											
8			5	M	SS	5					
9											
10			5	M	SS	12					
11											
12	SAND, fine grained, brown, medium dense to dense (SP)	COARSE ALLUVIUM	22	W	SS	12					
13											
14											
15			30	W	SS	10					
16											
17											
18											
19											
20			30	W	SS	25					
21											
22											
23											
24											
25			16	W	SS	12					
26											
27											
28											
29											
30	GRAVEL and LIMESTONE SLABS, brown and tan, medium dense (GP)	COARSE ALLUVIUM	21	W	SS	4					
31	**END OF BORING** Station 30.23	possibly WEATHERED LIMESTONE BEDROCK									

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-29.5' 3.25" HSA	**3/23/11**	**9:00**	**13.5'**	**12'**	**11.5'**		**10.3'**
BORING COMPLETED: **3/23/11**							
DR: **JB** LG: **DM** Rig: **43R**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

MN REVENUE WITHHOLDING FORM IC 134

MINNESOTA · REVENUE **IC134**

Withholding Affidavit for Contractors

This affidavit must be approved by the Minnesota Department of Revenue before the state of Minnesota or any of its subdivisions can make final payment to contractors.

Please type or print clearly. This will be your mailing label for returning the completed form.

Company name			Daytime phone	Minnesota tax ID number
Address			Total contract amount $	Month/year work began
City	State	Zip Code	Amount still due $	Month/year work ended

Project Information

Project number	Project location			
Project owner	Address	City	State	Zip code

Did you have employees work on this project? ☐ Yes ☐ No If no, who did the work?

Contractor type

Check the box that describes your involvement in the project and fill in all information requested.

☐ **Sole contractor**

☐ **Subcontractor**

Name of contractor who hired you

Address

☐ **Prime contractor**—If you subcontracted out any work on this project, all of your subcontractors must file their own IC134 affidavits and have them certified by the Department of Revenue *before* you can file your affidavit. For each subcontractor you had, fill in the information below and attach a copy of each subcontractor's certified IC134. If you need more space, attach a separate sheet.

Business name	Address	Owner/Officer

Sign here

I declare that all information I have filled in on this form is true and complete to the best of my knowledge and belief. I authorize the Department of Revenue to disclose pertinent information relating to this project, including sending copies of this form, to the prime contractor if I am a subcontractor, and to any subcontractors if I am a prime contractor, and to the contracting agency.

Contractor's signature Title Date

Mail to: Minnesota Revenue, Mail Station 6610, St. Paul, MN 55146-6610

Certificate of Compliance

Based on records of the Minnesota Department of Revenue, I certify that the contractor who has signed this certificate has fulfilled all the requirements of Minnesota Statutes 290.92 and 270C.66 concerning the withholding of Minnesota income tax from wages paid to employees relating to contract services with the state of Minnesota and/or its subdivisions.

Department of Revenue approval *Date*

Stock No. 5000134 (Rev. 1/07)

Instructions for Form IC134

Who must file

If you are a prime contractor, a contractor or a subcontractor who did work on a project for the state of Minnesota or any of its local government subdivisions — such as a county, city or school district — you must file Form IC134 with the Minnesota Department of Revenue.

This affidavit must be certified and returned before the state or any of its subdivisions can make final payment for your work.

If you're a prime contractor and a subcontractor on the same project

If you were hired as a subcontractor to do work on a project, and you subcontracted all or a part of your portion of the project to another contractor, you are a prime contractor as well. Complete both the subcontractor and prime contractor areas on a single form.

When to file

The IC134 cannot be processed until you finish the work. If you submit the form before the project is completed, it will be returned to you unprocessed. Mail Form IC134 to the address at the bottom of the form.

If you are a subcontractor or sole contractor, send in the form when you have completed your part of the project.

If you are a prime contractor, send in the form when the entire project is completed and you have received certified affidavits from all of your subcontractors.

How to file

If you have fulfilled the requirements of Minnesota withholding tax laws, the Department of Revenue will sign your affidavit and return it to you.

If any withholding payments are due to the state, Minnesota law requires certified payments before we approve the IC134.

Submit the certified affidavit to the government unit for which the work was done to receive your final payment. If you are a subcontractor, submit the certified affidavit to your prime contractor to receive your final payment.

Minnesota tax ID number

You must enter your Minnesota tax ID number on the form. You must have a Minnesota tax ID number if you have employees who work in Minnesota.

If you don't have a Minnesota ID number, you must apply for one. Call 651-282-5225.

An applications (Form ABR) is also available on our website at www.taxes.state.mn.us.

If you have no employees and did all the work yourself, you do not need a Minnesota tax ID number. If this is the case, enter your Social Security number in the space for Minnesota tax ID number and explain who did the work.

Information and assistance

If you need help or more information to complete this form, call 651-282-9999.

Additional forms are available on our website at www.taxes.state.mn.us or by calling 651-296-4444. TTY: Call 711 for Minnesota Relay.

We'll provide information in other formats upon request to persons with disabilities.

Use of Information

The Department of Revenue needs all the information to determine if you have met all state income tax withholding requirements. If all required information is not provided, the IC134 will be returned to you for completion.

All information on this affidavit is private by state law. It cannot be given to others without your permission, except to the Internal Revenue Service, other states that guarantee the same privacy and certain government agencies as provided by law.

ADDENDUM NO. 1

City No: 6202-4-10 (J7788)

Title: Reconstruct Sanitary Sewer in 2nd Street NW from 12th Avenue NW East to 8th Avenue NW and then North in 8th Avenue NW to Civic Center Drive NW.

ISSUED: April 16, 2012

BIDS OPENED AT: 11:00 A.M. on May 1, 2012

YOUR BID MUST ACKNOWLEDGE RECEIPT OF THIS ADDENDUM.

The following additions, corrections, or modifications are hereby made a part of the Contract Documents for the above referenced project.

The Proposal & Plan shall be revised as follows:

Proposal

1. Revise Notice of Bids, bid opening date

NOTICE OF BIDS

Notice is hereby given that bids will be received at the office of the City Clerk until **11:00 A.M. on Tuesday, May 1, 2012** ~~*Thursday March 26, 2012*~~ *for the construction of the following described local improvement, pursuant to Minnesota Statutes, Chapter 429, as amended, in accordance with the plans and specifications for the same which are on file in the Office of the City Clerk of said City:*

Russell J. Kelm

Russ Kelm, PE,

This addendum is 1-page, and will be incorporated into the plan and proposal prior to distribution.

FORM OF PROPOSAL

To the City of Rochester Council Members:

According to the advertisement of the Rochester City Council inviting proposals for the improvement of the section of highway hereinbefore named, and in conformity with the Contract, Plans, Specifications and Special Provisions pertaining thereto, all on file in the office of the Auditor of the City of Rochester:

(I)(We) hereby certify that (I am)(we are) the only person(s) interested in this proposal as principal(s); that this proposal is made and submitted without fraud or collusion with any other person, firm or corporation at all; that an examination has been made of the site of the work and the Contract form, with the Plans, Specifications and Special Provisions for the improvement.

(I)(We) understand that the quantities of work shown herein are approximate only and are subject to increase or decrease; that all quantities of work, whether increased or decreased within the limits specified in Mn/DOT 1903, are to be done at the unit prices shown on the attached schedule; that, at the time of opening bids, totals only will be read, but that comparison of bids will be based on the correct summation of item totals obtained from the unit prices bid, as provided in Mn/DOT 1301.

(I)(We) propose to furnish all necessary machinery, equipment, tools, labor and other means of construction and to furnish all materials specified, in the manner and at the time prescribed, all according to the terms of the Contract and Plans, Specifications, and the Special Provisions forming a part of this.

(I)(We) further propose to do all Extra Work that may be required to complete the contemplated improvement, at unit prices or lump sums to be agreed upon in writing before starting such work, or if such prices or sums cannot be agreed upon, to do such work on a Force Account basis, as provided in Mn/DOT 1904.

(I)(We) further propose to execute the form of Contract within 10 days after receiving written notice of award, as provided in Mn/DOT 1306.

(I)(We) further propose to furnish a payment bond equal to the Contract amount, and a performance bond equal to the Contract amount, with the aggregate liability of the bond(s) equal to twice the full amount of the Contract if the contract is less than or equal to five million dollars ($5,000,000.00), or if the contract is in excess of five million dollars ($5,000,000.00) the aggregate liability shall be equal to the amount of the contract, as security for the construction and completion of the improvement according to the Plans, Specifications and Special Provisions as provided in Mn/DOT 1305.

(I)(We) further propose to do all work according to the Plans, Specifications and Special Provisions, and to renew or repair any work that may be rejected due to defective materials or workmanship, before completion and acceptance of the Project by the City of Rochester.

Page 1

(I)(We) agree to all provisions of Minnesota Statutes, Section 181.59.

(I)(We) further propose to begin work and to prosecute and complete the same according to the time schedule set forth in the Special Provisions for the improvement.

(I)(We) assign to the City of Rochester all claims for overcharges as to goods and materials purchased in connection with this Project resulting from antitrust violations that arise under the antitrust laws of the United States and the antitrust laws of the State of Minnesota. This clause also applies to subContractors and first tier suppliers under this Contract.

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

ABBREVIATIONS OF SCHEDULE OF PRICES

NOTICE TO BIDDERS

Particular note should be made in regard to the clarity of numerals (figures) and to the procedure for alterations and the required certificate as directed by Section 1301.

The following abbreviations may be used in item description and unit of measure in the Schedule of Prices.

A	Arch
A-S	Antiseepage
AB	Asbestos Bonded
ACT	Actuated
AGG	Aggregate
ALUM	Aluminum
ASB	Asbestos
ASPH	Asphaltic
ASSY	Assemblies
B+B	Balled & Burlapped
BC	Bituminous Coated
BIT	Bituminous
BLDG	Building
BR	Bridge
CAL	Caliper
CB	Catch Basin
CEM	Cement
C and G	Curb and Gutter
CI	Cast Iron
C-I-P	Cast-in-Place
CL	Class
COMM	Commercial
CONC	Concrete
COND	Conductor
CONN	Connection
CONST	Construct
CONT	Continuously
CP	Cattle Pass
CTD	Coated
CU FT	Cubic Feet
CU YD	Cubic Yard
CULV	Culvert
CWT	Hundred Weight
DES	Design
DBL	Double
DI	Drop Inlet
DIAM	Diameter
DRWY	Driveway
EXC	Excavation
EXP	Expansion
FAB	Fabric
FE	Fence
FERT	Fertilizer
F+I	Furnish & Install
FOUND	Foundation
FT LG	Feet Long
FURN	Furnish
GA	Gauge
GRAN	Granular
HI	High
INP	In Place
INST	Install
JA	Jacked
LIN FT	Linear Feet
LG	Long
MAINT	Maintenance
MATL	Material
MGM	1000 Board Feet
MET	Metal
MOD	Modification
MPA	Metal Pipe Arch
MTD	Mounted
NON	MET Non Metallic
NON PERF	Non-Perforated
NON REINF	Non-Reinforced
OH	Overhead
PAVT	Pavement
PERF	Perofrated
PL	Plate
PNEUM	Pneumatic
PREST	Prestressed
PVC	Poly Vinyl Chloride
RCPA	Reinforced Concrete Pipe Arch
REINF	Reinforced
RELO	Relocation
RESTOR	Restoration
RNMC	Rigid Non Metallic Conduit
S-G	Sand& Gravel
SIG	Signal
SQ FT	Square Feet
STD	Standard
STL	Steel
STKPL	Stockpile
STR	Strength
STRUCT	Structural
SPPA	Structural Plate Pipe Arch
SYS	System
T	Traffic
TBR	Timber
TEMP	Temporary
THERMO	Thermoplastic
TRTD	Treated
UNTRTD	Untreated
VAR	Variable
VM	Vehicular Measure
WEAR	Wearing

PIPE-ARCH
PREC
PRECAST
RDWY
ROADWAY
RMC
RIGID METALLIC CONDUIT
SPE
SPECIAL
SQ YD
SQUARE YARD
STA
STATION
UNDERGRD
UNDERGROUND

NON-COLLUSION DECLARATION

The following Non-Collusion Declaration shall be executed by the bidder:

State Project No _____

Federal Project No _____

STATE OF MINNESOTA _____)
)ss
COUNTY OF _____)

I, _____, do state under penalty
(Name of person signing this declaration)

of perjury under 28 U.S.C. 1746 of the laws of the United States:

(1) that I am the authorized representative of _____
_____
(Name of individual, partnership or corporation submitting this proposal)

and that I have the authority to make this declaration for and on behalf of said bidder;

(2) that, in connection with this proposal, the said bidder has not either directly or indirectly entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding;

(3) that, to the best of my knowledge and belief, the contents of this proposal have not been communicated by the bidder or by any of his/her employees or agents to any person who is not an employee or agent of the bidder or of the surety on any bond furnished with the proposal, and will not be communicated to any person who is not an employee or agent of the bidder or of the said surety prior to the official opening of the proposal, and

(4) that, I have fully informed myself regarding the accuracy of the statements made in this declaration.

Signed: _____
(Bidder or his authorized representative)

SCHEDULE OF PRICES

BIDDER MUST FILL IN UNIT PRICES IN NUMERALS; MAKE EXTENSION FOR EACH ITEM AND TOTAL. FOR COMPLETE INFORMATION CONCERNING THESE ITEMS, SEE PLANS AND SPECIFICATIONS, INCLUDING SPECIAL PROVISIONS.

Item No.	Description	Units	Quantity	Unit Price	Total Price
Project 6202-4-10					
1 SANITARY SEWER (250)					
2021.501/00010	MOBILIZATION	LS	1.00		
2101.502/00010	CLEARING	TREE	3.00		
2101.507/00010	GRUBBING	TREE	3.00		
2104.501/00017	REMOVE SEWER PIPE (SANITARY)	L F	2,736.90		
2104.509/00101	REMOVE MANHOLE	EACH	19.00		
2563.601/00010	TRAFFIC CONTROL	LS	1.00		
S100.501/00610	TRENCH EXCAVATION FOR PIPE 24IN & UNDER 6FT TO 10FT DEEP	LIN FT	434.11		
S100.501/01013	TRENCH EXCAVATION FOR PIPE 24IN & UNDER 10FT TO 13FT DEEP	LIN FT	1,367.87		
S100.501/01315	TRENCH EXCAVATION FOR PIPE 24IN & UNDER 13FT TO 15FT DEEP	LIN FT	955.16		
S100.501/01517	TRENCH EXCAVATION FOR PIPE 24IN & UNDER 15FT TO 17FT DEEP	LIN FT	415.46		
S100.501/01719	TRENCH EXCAVATION FOR PIPE 24IN & UNDER 17FT TO 19FT DEEP	L F	33.15		
S100.505/00200	SIPHON SYSTEM	LS	1.00		
S100.507/00010	SOLID ROCK EXCAVATION	C Y	591.40		
S100.509/00020	SELECT MATERIAL FOR BACKFILL (LV)	C Y	100.00		
S100.511/00010	AGGREGATE FOR PIPE FOUNDATION GRADATION A	C Y	100.00		
S100.520/00080	FURNISH & INSTALL 8IN ALTERNATE PIPE SEWER	L F	2,177.14		
S100.520/00180	FURNISH & INSTALL 18IN ALTERNATE PIPE SEWER	L F	33.95		
S100.520/00210	FURNISH & INSTALL 21IN ALTERNATE PIPE SEWER	L F	2,756.58		
S100.545/00010	CONSTRUCT STRUCTURE TYPE SPECIAL	STR	1.00		
S100.545/00200	CONSTRUCT OUTSIDE MANHOLE DROP	L F	49.13		

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

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Item No.	Description	Units	Quantity	Unit Price	Total Price
S100.545/30010	CONSTRUCT STRUCTURE TYPE 3 6FT TO 10FT DEEP	STR	1.00		
S100.545/30013	CONSTRUCT STRUCTURE TYPE 3 10FT TO 13FT DEEP	STR	3.00		
S100.545/30019	CONSTRUCT STRUCTURE TYPE 3 17FT TO 19FT DEEP	STR	1.00		
S100.545/35013	CONSTRUCT STRUCTURE TYPE 3A 10FT TO 13FT DEEP	STR	1.00		
S100.545/35015	CONSTRUCT STRUCTURE TYPE 3A 13FT TO 15FT DEEP	STR	1.00		
S100.545/35017	CONSTRUCT STRUCTURE TYPE 3A 15FT TO 17FT DEEP	STR	2.00		
S100.545/40415	CONSTRUCT STRUCTURE TYPE 4 (48IN) 13FT TO 15FT DEEP	STR	1.00		
S100.545/40513	CONSTRUCT STRUCTURE TYPE 4 (60IN) 10FT TO 13FT DEEP	STR	1.00		
S100.545/40610	CONSTRUCT STRUCTURE TYPE 4 (72IN) 6FT TO 10FT DEEP	STR	1.00		
S100.545/40613	CONSTRUCT STRUCTURE TYPE 4 (72IN) 10FT TO 13FT DEEP	STR	1.00		
S100.545/40813	CONSTRUCT STRUCTURE TYPE 4 (96IN) 10FT TO 13FT DEEP	STR	1.00		
S100.566/10080	ABANDON PIPE SEWER	L F	217.00		
S100.572/00020	CONNECT INTO EXISTING SANITARY SEWER	EACH	8.00		
	Total 1 SANITARY SEWER (250)				
1 SERVICE CONNECTION (094)					
C150.503/00004	4IN SANITARY SEWER SERVICE CONNECTION	EACH	86.00		
C150.503/00006	6IN SANITARY SEWER SERVICE CONNECTION	EACH	6.00		
C150.503/10004	4IN SANITARY SEWER SERVICE CONNECTION	L F	10.00		
C150.503/10006	6IN SANITARY SEWER SERVICE CONNECTION	L F	68.00		
C150.504/00010	1IN WATER SERVICE CONNECTION	EACH	93.00		
C150.504/10010	1IN WATER SERVICE CONNECTION	L F	10.00		
	Total 1 SERVICE CONNECTION (094)				
2 STORM SEWER (450)					
2104.501/00016	REMOVE SEWER PIPE (STORM)	L F	1,270.20		
2104.509/00101	REMOVE MANHOLE	EACH	5.00		
2104.509/00102	REMOVE CATCH BASIN	EACH	15.00		

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Item No.	Description	Units	Quantity	Unit Price	Total Price
2503.602/00042	CONNECT TO EXISTING STORM SEWER	EACH	9.00		
2511.501/00014	RANDOM RIPRAP CLASS IV	C Y	11.00		
2511.515/00014	GEOTEXTILE FILTER TYPE IV	S Y	17.00		
S100.516/00125	FURNISH & INSTALL 12IN REINFO-RCED CONCRETE PIPE CLASS 5	L F	472.21		
S100.516/00153	FURNISH & INSTALL 15IN REINFO-RCED CONCRETE PIPE CLASS 3	L F	749.73		
S100.516/00183	FURNISH & INSTALL 18IN REINFO-RCED CONCRETE PIPE CLASS 3	L F	319.88		
S100.516/00213	FURNISH & INSTALL 21IN REINFO-RCED CONCRETE PIPE CLASS 3	L F	8.00		
S100.516/00243	FURNISH & INSTALL 24IN REINFO-RCED CONCRETE PIPE CLASS 3	L F	55.40		
S100.516/00363	FURNISH & INSTALL 36IN REINFO-RCED CONCRETE PIPE CLASS 3	L F	24.00		
S100.516/10223	FURNISH & INSTALL 22IN SPAN REINFORCED CONCRETE PIPE-ARCH CL 3A	L F	62.49		
S100.540/00240	FURNISH & INSTALL 24IN REINFORCED CONCRETE PIPE APRON	EACH	1.00		
S100.545/10006	CONSTRUCT STRUCTURE TYPE 1 0FT TO 6FT DEEP	STR	24.00		
S100.545/20006	CONSTRUCT STRUCTURE TYPE 2 0FT TO 6FT DEEP	STR	1.00		
S100.545/20010	CONSTRUCT STRUCTURE TYPE 2 6FT TO 10FT DEEP	STR	1.00		
S100.545/40406	CONSTRUCT STRUCTURE TYPE 4 (48IN) 0FT TO 6FT DEEP	STR	10.00		
S100.545/40413	CONSTRUCT STRUCTURE TYPE 4 (48IN) 10FT TO 13FT DEEP	STR	1.00		
S100.545/40510	CONSTRUCT STRUCTURE TYPE 4 (60IN) 6FT TO 10FT DEEP	STR	1.00		
S100.548/00010	FURNISH & INSTALL CASTING ASSEMBLY	EACH	10.00		
S100.564/00060	REMOVE CONCRETE APRON	EACH	1.00		
	Total 2 STORM SEWER (450)				
3 WATERMAIN (150)					
W200.501/00008	TRENCH EXCAVATION FOR PIPE 14IN & UNDER 0FT TO 8FT DEEP	L F	3,222.70		
W200.510/00010	GRANULAR MATERIAL FOR BACKFILL	C Y	100.00		
W200.511/00010	AGGREGATE FOR PIPE FOUNDATION GRADATION A	C Y	100.00		

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Item No.	Description	Units	Quantity	Unit Price	Total Price
W200.528/00040	FURNISH & INSTALL 4IN DUCTILE IRON PIPE CLASS 52	L F	14.10		
W200.528/00060	FURNISH & INSTALL 6IN DUCTILE IRON PIPE CLASS 52	L F	174.00		
W200.528/00080	FURNISH & INSTALL 8IN DUCTILE IRON PIPE CLASS 52	L F	2,974.80		
W200.550/00060	FURNISH & INSTALL 6IN GATE VALVE AND BOX	EACH	11.00		
W200.550/00080	FURNISH & INSTALL 8IN GATE VALVE AND BOX	EACH	8.00		
W200.560/00020	FURNISH & INSTALL HYDRANT ASSEMBLY	EACH	7.00		
W200.562/00010	FURNISH & INSTALL WATER MAIN FITTINGS	LB	1,701.00		
W200.564/00030	REMOVE HYDRANT ASSEMBLY	EACH	6.00		
W200.564/00040	REMOVE EXISTING WATERMAIN	L F	3,205.40		
W200.572/00010	CONNECT TO EXISTING WATERMAIN	EACH	14.00		
	Total 3 WATERMAIN (150)				
4 STREET (350)					
2104.501/00022	REMOVE CURB AND GUTTER	L F	5,037.90		
2104.505/00100	REMOVE PAVEMENT	S Y	10,580.90		
2104.505/00108	REMOVE CONCRETE DRIVEWAY PAVEMENT	S Y	8,329.20		
2104.505/00110	REMOVE CONCRETE PAVEMENT	S Y	561.00		
2104.505/00120	REMOVE BITUMINOUS PAVEMENT	S Y	1,447.30		
2104.513/00011	SAWING BIT PAVEMENT (FULL DEPTH)	L F	274.20		
2104.521/00219	SALVAGE GUARD RAIL	L F	80.00		
2104.523/00539	SALVAGE SIGN	EACH	49.00		
2105.501/00010	COMMON EXCAVATION (P)	C Y	3,648.00		
2105.525/00030	TOPSOIL BORROW (CV) (P)	C Y	509.00		
2211.501/00050	AGGREGATE BASE CLASS 5	TON	83.10		
2211.503/00050	AGGREGATE BASE (CV) CLASS 5 (P)	C Y	2,623.40		

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Item No.	Description	Units	Quantity	Unit Price	Total Price
2301.501/00010	CONCRETE PAVEMENT	S Y	496.10		
2301.511/00010	STRUCTURAL CONCRETE	C Y	110.00		
2301.529/00011	REINFORCEMENT BARS (EPOXY COATED)	LB	429.00		
2301.538/00010	DOWEL BAR	EACH	374.00		
2301.602/00016	DRILL & GROUT DOWEL BAR (EPOXY COATED)	EACH	72.00		
2301.602/00021	DRILL & GROUT REINF BAR (EPOXY COATED)	EACH	7.00		
2360.501/12200	TYPE SP 9.5 WEARING COURSE MIX (2,B)	TON	862.90		
2360.502/22200	TYPE SP 12.5 NON WEAR COURSE MIX (2,B)	TON	1,681.20		
2531.501/02320	CONCRETE CURB & GUTTER DESIGN B624	L F	6,575.90		
2531.507/00060	6" CONCRETE DRIVEWAY PAVEMENT	S Y	1,449.60		
2531.507/00070	7" CONCRETE DRIVEWAY PAVEMENT	S Y	31.40		
2554.603/00022	INSTALL GUARDRAIL	L F	80.00		
2564.602/00015	INSTALL SIGN	EACH	49.00		
2573.502/00010	SILT FENCE, TYPE HEAVY DUTY	L F	173.00		
2573.530/00010	STORM DRAIN INLET PROTECTION	EACH	37.00		
2573.540/00020	FILTER LOG TYPE WOOD FIBER BIOROLL	L F	90.00		
2573.550/00010	EROSION CONTROL SUPERVISOR	LS	1.00		
2573.602/00020	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EACH	5.00		
2575.505/00060	SODDING TYPE MINERAL	S Y	6,103.90		
	Total 4 STREET (350)				
5 PED FACILITIES (550)					
2104.503/00020	REMOVE CONCRETE SIDEWALK	S F	2,481.90		
2521.501/00040	4" CONCRETE WALK	S F	75.80		
2521.501/00060	6" CONCRETE WALK	S F	2,884.30		

Department of Public Works
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Item No.	Description	Units	Quantity	Unit Price	Total Price
2531.618/00010	TRUNCATED DOMES	S F	292.00		
Total 5 PED FACILITIES (550)					
Grand Total					

SURETY DEPOSITS

New Law requires surety deposits for many out-of-state Contractors

A portion of payments made to out-of-state Contractors must be deposited with the state of Minnesota in many instances under a new law passed by the 1989 Legislature.

The law requires that 8 percent of each payment paid to out-of-state Contractors for work done in Minnesota must be withheld as a surety deposit on any contract that can reasonably be expected to exceed $100,000.

This requirement may be waived, however, if certain conditions are met.

Following are some guidelines to use with the new law.

Once an out-of-state Contractor enters into a contract that is for more than or can be expected to be more than $100,000, the Contractor will have to file form SD-E (Exemption from Surety Deposits for Out-of-State Contractors) with the Department of Revenue. The department will use the form to determine if the Contractor is exempt from the 8 percent surety deposit requirements.

The department will grant an exemption if:

The Contractor gives the department a cash surety or bond, secured by an insurance company licensed in Minnesota, which guarantees the Contractor will comply with all provisions of Minnesota withholding, sales, and corporate income tax laws, or

The Contractor has done construction work in Minnesota at any time during the three calendar years before entering into the contract and has fully complied with Minnesota withholding, sales, and corporate income tax laws.

If the Contractor is exempt, the department will certify the form and return a copy to the Contractor, who will then be responsible to provide a copy to whoever hired them.

If the Contractor is not exempt, the department will notify whoever hired the Contractor to withhold the 8 percent surety deposit from each payment made to the Contractor. The person or company hiring the Contractor will use form SD-D to make the surety deposits.

The Department of Revenue will retain the surety deposits until the Contractor's state tax obligations are considered fulfilled. The department will then refund, with interest, any amounts held as surety.

Out-of-state Contractors working for Minnesota subdivisions will still have to file the Withholding Affidavit for Contractors (form IC-134) in addition to complying with the new provisions.

If you need more forms of information, please call (612) 296-6181 from the Twin Cities area and (toll-free) 1-800-657-3777 from elsewhere.

You may also write to: Minnesota Department of Revenue
Taxpayer Information Division
Mail Station 4450
St. Paul, MN 55146-4450

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

TO WHOM IT MAY CONCERN:

A new Minnesota Law effective January 1, 1990, now governs contracts over $100,000.00 for non-Minnesota Contractors.

We have been informed by the Minnesota Department of Revenue that certain requirements have not been met. Therefore, we are withholding an 8% surety deposit from your payment.

You are eligible to have these funds returned when the state tax obligations are met.

Gross Amount

8% Surety Deposit _____

Net Amount Paid

If you have any questions, contact Mr. Dan Weber at (507) 328-2409.

Department of Public Works
201 4th Street SE, Room 108
Rochester, MN 55904-3740
(507) 328-2400

FORM 21126D (FF REV. 4-00)

Project No. **(J7788)**

GRAND TOTAL $ _____

PROPOSAL GUARANTY as required by 1208 of the Specifications: "A (certified check) (bond), prepared as required by 1208 of the Specifications and payable to the City of Rochester, Minnesota, in an amount equal to at least (5%) percent of the total amount of the bid is submitted herewith as a proposal guaranty.

NON-COLLUSION AFFIDAVIT: If a Non-Collusion affidavit is found in this Proposal it must be signed by each bidder.

RECEIPT OF ADDENDA as required by 1210 of the Specifications:
The undersigned hereby acknowledges receipt of and has considered:

Addendum No. **1** Dated **March 16, 2012** Addendum No. _____ Dated _____

Addendum No. ___ Dated _____ Addendum No. _____ Dated _____

Signed _____

RECEIPT OF PLAN:
The undersigned hereby acknowledges receipt of and has considered: **(J7788)** **67** Total Sheets.

Signed _____

EXECUTION OF PROPOSAL as required by 1206 of the Specifications:

This proposal dated the _____ day of _____, 20____

Signed: _____, P.O. Address _____ as an individual.

Signed: _____, P.O. Address _____ as an individual.

Doing business under the name and style of _____

Signed: _____, for _____ a partnership.

NAME BUSINESS ADDRESS

Signed: _____, for _____ a corporation,
Incorporated under the laws of the State of _____

Name of President _____ Business Address _____

Name of Vice-President _____ Business Address _____

Name of Secretary _____ Business Address _____

Name of Treasurer _____ Business Address _____

(NOTE: Signatures shall comply with 1206 of the Specifications.)